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**UNITED STATES DISTRICT COURT**  
**NORTHERN DISTRICT OF CALIFORNIA**

NETFLIX, INC.,

Plaintiff,

v.

BROADCOM INC., VMWARE LLC,

Defendants.

Case No. 3:25-cv-3738

**COMPLAINT FOR PATENT  
INFRINGEMENT**

**JURY TRIAL DEMANDED**

1 Plaintiff, Netflix, Inc. (“Plaintiff” or “Netflix”) hereby asserts the following claims for Patent  
2 Infringement against Defendants Broadcom Inc. (“Broadcom”) and VMware LLC (“VMware”),  
3 and alleges as follows:

4 **NATURE OF THE ACTION**

5 1. This is a civil action for patent infringement arising under the patent laws of the  
6 United States, 35 U.S.C. § 1, et seq.

7 2. Defendants Broadcom and VMware, jointly and severally, have directly infringed  
8 and continue to infringe, have induced and continue to induce, and have contributed to and continue  
9 to contribute to infringement of one or more claims of U.S. Patent Nos. 10,331,472 (the  
10 “’472 Patent”) and 7,313,102 (the “’102 Patent”) through their development, use, and  
11 commercialization of the Broadcom Load Balancing Accused Products and Broadcom Subnet  
12 Provisioning Accused Products, respectively, as defined below. Defendant Broadcom has directly  
13 infringed and continues to infringe, has induced and continues to induce, and has contributed to  
14 and continues to contribute to infringement of U.S. Patent No. 7,649,912 (the “’912 Patent”) through its development, use, and commercialization of the Broadcom Switching Accused  
15 Products, as defined below. The ’472 Patent, ’102 Patent, and ’912 Patent, collectively, are referred  
16 to as the “Asserted Patents.”

17 3. Netflix is the owner of the Asserted Patents, which were duly and legally issued by  
18 the United States Patent and Trademark Office (“USPTO”). For each of the Asserted Patents,  
19 Netflix owns all substantial rights to sue for infringement in its own name, including for past,  
20 present, and future damages, and injunctive relief.

21 4. Netflix seeks monetary damages as redress for Broadcom’s and VMware’s  
22 infringement.  
23

24 **THE PARTIES**

25 5. Netflix is a Delaware corporation with its principal place of business located at 121  
26 Albright Way, Los Gatos, California 95032.

27 6. Netflix was founded in Scotts Valley, California in 1997 and is an innovative video  
28 on-demand streaming services company and one of the world’s leading entertainment services

1 bringing TV series, films, games, and live content to 278 million members in over 190 countries.

2 7. Broadcom is a corporation organized under the laws of the State of Delaware with  
3 regular and established places of business in this Judicial District, including offices in Palo Alto,  
4 Petaluma, and San Jose.

5 8. Broadcom's organizational history involves a complex web of mergers and  
6 acquisitions. In brief, in 1999, Hewlett-Packard's Semiconductor Products Group spun off as  
7 Agilent Technologies, which later formed Avago Technologies. Avago merged with and acquired  
8 multiple companies between 2005 to 2015. Then, in 2015, Avago announced it would buy  
9 Broadcom but adopt the Broadcom name because of its broader name recognition.<sup>1</sup> Broadcom  
10 today comprises an amalgamation of companies, including Brocade Communications Systems, CA  
11 Technologies, Symantec Enterprise Security, and Avago, among many others.<sup>2</sup> Broadcom is known  
12 to sell off its acquired companies for parts in a strategy summed up as: "Buy. Chop up. Sell off.  
13 Raise prices. Rinse. Repeat."<sup>3</sup>

14 9. On May 26, 2022, Broadcom and VMware Inc. entered into an Agreement and Plan  
15 of Merger (the "Merger Agreement"), and on November 22, 2023, Broadcom merged with or  
16 acquired VMware Inc. for \$69 billion in a "transformational" transaction.<sup>4</sup>

17 10. The series of transactions and agreements executed between Broadcom and VMware  
18 Inc. that ultimately resulted in Broadcom's merger and/or acquisition of VMware Inc. is complex,  
19 perhaps intentionally so.

20 11. At the end of the transaction, VMware Inc. was renamed VMware LLC, and VMware  
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23 <sup>1</sup> "Avago Technologies to Acquire Broadcom for \$37 Billion," Broadcom.com (May 28, 2015),  
24 <https://investors.broadcom.com/news-releases/news-release-details/avago-technologies-acquire-broadcom-37-billion>.

25 <sup>2</sup> "Company History," Broadcom.com, <https://www.broadcom.com/company/about-us/company-history>.

26 <sup>3</sup> Joff Wild, "Five big patent talking points raised by Broadcom's proposed buy-out of  
27 Qualcomm," IAM (November 9, 2017),  
<https://www.lexology.com/library/detail.aspx?g=925c5af8-43a7-480f-af7c-7dc896541c28>.

28 <sup>4</sup> "Broadcom Inc. Announces Fourth Quarter and Fiscal Year 2023 Financial Results and  
Quarterly Dividend," Broadcom.com (December 7, 2023), <https://investors.broadcom.com/news-releases/news-release-details/broadcom-inc-announces-fourth-quarter-and-fiscal-year-2023>.

1 products were thereafter sold under the brand name “VMware by Broadcom.”<sup>5</sup> VMware Inc. and  
2 VMware LLC are collectively referred to herein as “VMware.”

3 12. VMware has a principal place of business in this District, at 3401 Hillview Avenue,  
4 Palo Alto, California, 94304.

### 5 **JURISDICTION AND VENUE**

6 13. Netflix brings this civil action for patent infringement under the Patent Laws of the  
7 United States, 35 U.S.C. § 1 et. seq., including 35 U.S.C. §§ 271, 281-285.

8 14. This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C.  
9 §§ 1331 and 1338.

10 15. This Court has personal jurisdiction over Broadcom and VMware because they  
11 maintain their principal places of business in this District and engage in continuous and systematic  
12 business activities within this District.

13 16. Venue is proper in this District pursuant to at least 28 U.S.C. § 1400(b) because  
14 Broadcom and VMware maintain their principal places of business in this District, reside in this  
15 district, and have committed acts of patent infringement in this District.

### 16 **BACKGROUND**

17 17. This Complaint asserts causes of action for infringement of the ’472 Patent, the ’102  
18 Patent, and the ’912 Patent, (collectively, the “Asserted Patents”).

19 18. The ’472 Patent is entitled “Virtual Machine Service Availability.” Bo Wang is  
20 identified on the face of the ’472 Patent as the inventor. On June 25, 2019, the USPTO duly and  
21 legally issued the ’472 Patent from Application No. 15/503,138, originally filed as  
22 PCT/CN2014/085541 on August 29, 2014. A true and correct copy of the ’472 Patent is attached  
23 as Exhibit A. Netflix is the current owner by assignment of all rights, title, and interest in and under  
24 the ’472 Patent, including the right to sue and obtain damages for past, current, and future  
25 infringement. Netflix has standing to sue for infringement of the ’472 Patent.

26 19. The ’102 Patent is entitled “System and Method for Subnet Configuration and  
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28 <sup>5</sup> VMware.com, <https://www.vmware.com/>; VMware LLC Securities and Exchange Commission Form 8-K, (November 22, 2023), <http://edgar.secdatabase.com/1558/119312523282097/filing-main.htm>.

Selection.” Bryan Craig Stephenson, Jennifer Jie Fu, Julie Kosakowski, Samuel L. Scarpello, Jr., Andrea Eakin, Jon Russell Sawyer, Rheid Schloss, and Ron MacDonald are identified on the face of the ’102 Patent as the inventors. On December 25, 2007, the USPTO duly and legally issued the ’102 Patent from Application No. 10/390,492, filed on March 17, 2003. A true and correct copy of the ’102 Patent is attached as Exhibit B. Netflix is the current owner by assignment of all rights, title, and interest in and under the ’102 Patent, including the right to sue and obtain damages for past, current, and future infringement. Netflix has standing to sue for infringement of the ’102 Patent.

20. The ’912 Patent is entitled “Time Synchronization, Deterministic Data Delivery and Redundancy for Cascaded Nodes on Full Duplex Ethernet Networks.” Sivaram Balasubramanian, Anatoly Moldovansky, and Kendal R. Harris are identified on the face of the ’912 Patent as the inventors. On January 19, 2010, the USPTO duly and legally issued the ’912 Patent from Application No. 11/115,536, filed on April 27, 2005. A true and correct copy of the ’912 Patent is attached as Exhibit C. Netflix is the current owner by assignment of all rights, title, and interest in and under the ’912 Patent, including the right to sue and obtain damages for past, current, and future infringement. Netflix has standing to sue for infringement of the ’912 Patent.

### **The ’472 Patent**

21. The ’472 Patent is generally directed to improvements in implementing network services across a server network (for example, partitions implementing various databases).<sup>6</sup> Before the ’472 Patent, a server network executing a service with high availability requirements required replicating the service on multiple servers, so that if one server failed, the service could continue to operate on the redundant server.<sup>7</sup> Even then, if the second server also failed, the service would become entirely unavailable to the users of the service.<sup>8</sup> The innovation of the ’472 Patent avoids the significant reliability issues and inefficiencies in the prior art. The patent describes executing services in a server network on virtual machines in a server cluster and instantiating the service as

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<sup>6</sup> See ’472 Patent, 1:62-2:8.

<sup>7</sup> *Id.*, 1:54-56.

<sup>8</sup> *Id.*, 1:56-57.

1 a virtual machine image stored on a hardware server.<sup>9</sup> For example, a service availability controller  
 2 monitors or polls services executing on different virtual machines on the different servers in the  
 3 network to determine when and which services to instantiate on which virtual machine.<sup>10</sup> In this  
 4 way, the '472 Patent enhances overall service availability without additional hardware costs while  
 5 limiting required redundancy and increasing efficiency in resource usage and allocation of a server  
 6 network.<sup>11</sup> The '472 Patent therefore addresses a specific technical problem, existing in then-  
 7 existing methods, of ensuring service availability while limiting unnecessary redundancy.<sup>12</sup>

8 22. The '472 Patent claims specific, novel techniques for solving these technical  
 9 problems and improving the technological systems and methods themselves. For example, Claim 6  
 10 recites:<sup>13</sup>

11 A method comprising:  
 12 monitoring a first availability of a first service, the first service  
 13 having a first availability requirement and a first availability  
 14 tolerance;  
 15 detecting a reduction in the first availability of the first  
 16 service;  
 17 creating capacity for the first service by deactivating a second  
 18 service on a first active virtual machine on a server, the second service  
 19 having a second availability exceeding a second availability tolerance  
 20 and having a second availability requirement lower than the first  
 21 availability requirement; and  
 22 activating a second active virtual machine executing the first  
 23 service on the server.<sup>14</sup>

24 <sup>9</sup> *Id.*, 1:62-65.

25 <sup>10</sup> *Id.*, 2:58-63.

26 <sup>11</sup> *Id.*, 1:65-2:8.

27 <sup>12</sup> *Id.*, 1:44-51.

28 <sup>13</sup> The claims mentioned in this section are merely exemplary and not representative of all the claims of the '472 Patent.

<sup>14</sup> *Id.*, 9:32-45.

23. In one aspect, the patent explains that the service availability controller determines when and which service(s) to instantiate on which virtual machine(s) by analyzing the availability requirements and availability tolerances of each of the services.<sup>15</sup> As recited, the claimed solution involves monitoring (*e.g.*, polling) a particular virtual service and detecting a reduction in service availability. The recited solution further advantageously identifies a second service for deactivation. A service will only be identified for activation if it meets the specific claimed availability parameters. The claimed solution deactivates the second service and reallocates the resources used by the second service, thereby avoiding an interruption of the first service.<sup>16</sup> Claim 6 therefore recites a combination of features that provide particular, concrete technical improvements to a technical problem relating to enhancing overall service availability without additional hardware costs. Specifically, and for example, reducing and/or eliminating the need for redundant servers to maintain high availability of a virtual service by identifying and dynamically responding to a reduction in availability of the virtual service.

24. The above examples and disclosures demonstrate that the claimed invention is not abstract and is directed to improvements in the technology itself.

25. Pursuant to 35 U.S.C. § 282, the '472 Patent is presumed valid and patent eligible.

### **The '102 Patent**

26. The '102 Patent is generally directed to improvements in subnetwork (or "subnet") management and provisioning within network infrastructures.<sup>17</sup> Before the '102 Patent, subnet management and provisioning lacked the ability to manage inter-related characteristics of the IP address space, such as performance and security characteristics.<sup>18</sup> Prior art methods required the network manager to determine the IP address and network mask of an available subnet that met a network consumer's requirements.<sup>19</sup> Further, then-existing tools were separate and apart from the

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<sup>15</sup> *Id.* 4:35-44.

<sup>16</sup> *Id.*, 3:40-44 & 4:35-44.

<sup>17</sup> *See* '102 Patent, 1:55-2:13.

<sup>18</sup> *Id.*, 1:29-48.

<sup>19</sup> *Id.*

provisioning system itself.<sup>20</sup> This separation hindered efficient resource allocation and made it difficult to adapt to fluctuating network demands, leading to potential delays and increased error rates.<sup>21</sup> The innovation of the '102 Patent avoids the inefficiencies of subnet management disclosed in the prior art. The patent describes provisioning subnets by grouping the subnets based on their logical properties, such as security characteristics and performance characteristics, route information, or subnet usage metering.<sup>22</sup> The patent also describes a graphical user interface (GUI) that allows a network consumer to make constrained selections of a particular subnet.<sup>23</sup> The '102 Patent therefore addresses a specific technical problem (efficient subnet management and provisioning), which existed due to then-existing methods.

27. The '102 Patent claims specific, novel techniques for solving these technical problems and improving the technological systems and methods themselves. For example, Claim 1 of the '102 Patent recites:<sup>24</sup>

A method for provisioning subnets, the method comprising:  
 grouping the subnets into subnet groups based on logical  
 properties of the subnets;  
 assigning to each network consumer those subnet groups that  
 are accessible to that network consumer; and  
 providing for constrained selection of a particular subnet by a  
 network consumer accomplished by way of a graphical user interface  
 with selectable fields, wherein the constrained selection includes (i)  
 selecting a public or private type address space, (ii) if applicable,  
 selecting a gateway device from amongst those gateway devices that  
 are accessible to the network consumer, and (iii) selecting a subnet

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<sup>20</sup> *Id.*

<sup>21</sup> *Id.*

<sup>22</sup> *Id.*, 3:35-47.

<sup>23</sup> *Id.*, 1:55-61.

<sup>24</sup> The claims mentioned in this section are merely exemplary and not representative of all the claims of the '102 Patent.



1 group from those subnet groups that are accessible to the network  
2 consumer, and (iv) selecting a subnet mask that represents a size of  
3 the particular subnet.

4 28. In one aspect, the patent explains that logical properties for grouping may include  
5 security characteristics and performance characteristics, route information, subnet usage metering,  
6 IP address space information, availability of a dynamic host configuration protocol (DHCP),  
7 availability of multicasting support, and/or resilience to failures.<sup>25</sup>

8 29. As recited, the claimed solution involves logically grouping subnets and limiting  
9 subnets assigned to a consumer, and providing a constrained selection of subnets by  
10 advantageously implementing a GUI with certain selectable fields, that constrain the potential  
11 subnet provisioning based advantageously on (i) whether a public or private type address space is  
12 needed, (ii) ensuring any applicable gateway devices are accessible by the network consumer, (iii)  
13 ensuring the constrained group of subnet groups are all accessible by the network consumer, and  
14 further ensuring the subnet mask reflects the size of the particular constrained subnets. Claim 1  
15 therefore recites a combination of features that provide particular, concrete technical improvements  
16 to a technical problem relating to the accuracy and reliability of subnet provisioning in a network  
17 environment. Specifically, and for example, by dynamically constraining the selection of subnets  
18 to eliminate user error and improve the subnet provisioning process (in turn, subnet provisioning  
19 improves the efficiency of a network, for example, by confining data traffic to smaller sections of  
20 the network, more efficiently routing data, containing potential security breaches, and reducing  
21 wastage of IP addresses).

22 30. The above examples and disclosures demonstrate that the claimed invention is not  
23 abstract and is directed to improvements in the technology itself.

24 31. Pursuant to 35 U.S.C. § 282, the '102 Patent is presumed valid and patent eligible.

### 25 **The '912 Patent**

26 32. The '912 Patent is generally directed to improvements in the synchronization of node  
27 clocks within a network of nodes, specifically enhancing the precision and efficiency of time

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<sup>25</sup> *Id.*, 3:35-47.

1 synchronization in networked systems using the IEEE 1588 standard.<sup>26</sup> The first version of the  
2 IEEE 1588 standard was published in 2002 and established a basic framework for the Precision  
3 Time Protocol (PTP). However, the IEEE 1588-2002 standard was sensitive to network delays,  
4 making it difficult to maintain precise synchronization in networks. The '912 Patent specifically  
5 addresses a particular technical problem with then-existing methods, including issues such as  
6 network collisions, limited data throughput, and non-deterministic data delivery.<sup>27</sup>

7 33. The '912 Patent claims specific, novel techniques for enhancing the synchronization  
8 of clocks in networked nodes by addressing delays through timestamp adjustments, prioritizing  
9 time synchronization frames for transmission, and ensuring reliable data delivery paths, particularly  
10 in industrial control and motion control applications using full duplex Ethernet networks.<sup>28</sup> For  
11 example, Claim 1 recites:<sup>29</sup>

12 A method of synchronizing node clocks within a plurality of  
13 nodes on a network including a time master node having a master  
14 clock and including at least one time slave node, the method  
15 comprising:

16 connecting the plurality of nodes through a full duplex  
17 Ethernet network with a daisy-chain connection of the nodes to each  
18 other;

19 transmitting a time synchronization message frame from one  
20 of the plurality of nodes to a second one of said plurality of nodes, the  
21 time synchronization message frame having a timestamp field  
22 according to IEEE 1588 standard and a checksum field and a cyclic  
23 redundancy checking code;

24 at a given one of the plurality of nodes between the first and  
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26 <sup>26</sup> See '912 Patent, 2:34-47.

27 <sup>27</sup> *Id.*, 1:25-2:30.

28 <sup>28</sup> *Id.*, 2:34-3:29.

<sup>29</sup> The claims mentioned in this section are merely exemplary and not representative of all the claims of the '912 Patent.

second nodes:

(i) receiving the time synchronization message frame;

(ii) reading a timestamp value of a timestamp field of the time synchronization message frame;

(iii) near a time of retransmission of the time synchronization message frame from the given node, adjusting the read timestamp value in the timestamp field by an amount of delay between time of reception and a time of the retransmission to produce a corrected timestamp value;

(iv) writing the corrected timestamp value over the timestamp value of the timestamp field of the time synchronization message frame;

(v) adjusting a checksum value in the checksum field and adjusting the cyclic redundancy checking code of the time synchronization message frame to account for adjusting the timestamp value; and

(vi) transmitting the time synchronization message frame from the given node; and

providing a highest priority to process and forward time synchronization message frames and lower priorities to process and forward other types of message frames.<sup>30</sup>

34. As recited with respect to one aspect, the claimed solution involves adjusting a timestamp to produce a corrected timestamp value, writing that corrected value over a current value, with this correct value, adjusting a checksum value and cyclic redundancy checking code of the sync message frame to account for adjusted timestamp value, and, at the intermediary node, prioritizing processing and forwarding of this corrected sync message frame.

35. Claim 1 therefore recites a combination of features that provide particular, concrete

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<sup>30</sup> *Id.*, 9:44-10:12.

1 technical improvements to a technical problem relating to the reducing latency and collisions in a  
 2 network. Specifically, and for example, allowing for improved communication between nodes in a  
 3 network by improving clock synchronization through dynamic adjustments to a timestamp value  
 4 and by prioritizing time synchronization frames for transmission.

5 36. The '912 Patent further elaborates on specific embodiments for the claimed method.  
 6 For example, the '912 Patent explains:

7 When a timestamp point according to IEEE 1588 standard is reached  
 8 during transmission, a timestamp trigger is sent to associated  
 9 timestamp register 32-39 to capture transmit timestamp (TxTs) from  
 10 delay time counter 31, as represented by process block 79. Next, the  
 11 switching delay experienced by the frame inside switch is calculated  
 12 by subtracting a saved receive timestamp (RxTs) from a transmit  
 13 timestamp (TxTs), as represented by process block 80. Next, as  
 14 represented by process block 81, the UDP checksum for the time  
 15 synchronization message is recomputed from the saved UDP  
 16 checksum, for the added switching delay to origin timestamp at  
 block 82 and inserted at appropriate location in frame. Next, as  
 represented by process block 82, the switching delay is added to the  
 saved origin timestamp and is inserted at the appropriate location in  
 frame. Then, the CRC error checking code for the entire frame is  
 computed and inserted at the end of frame, as represented by process  
 block 83. The frame transmission is completed, followed by inter-  
 frame gap according IEEE 802.3 standard and the transmit channel is  
 ready for transmission as represented by process block 75.<sup>31</sup>

17 37. In other words, a network switch may capture and adjust timestamps of transmitted  
 18 time synchronization message frames to account for internal switching delays, thereby ensuring  
 19 precise clock synchronization.

20 38. The above examples and disclosures demonstrate that the claimed invention is not  
 21 abstract and is directed to improvements in the technology itself.

22 39. Pursuant to 35 U.S.C. § 282, the '912 Patent is presumed valid and patent eligible.

### 23 **DEFENDANTS' INFRINGEMENT AND LIABILITY**

24 40. The '472 and '102 Patents are infringed by virtualization products (defined below as  
 25 the "Broadcom Load Balancing Accused Products" and "Broadcom Subnet Provisioning Accused  
 26 Products", respectively), which Broadcom acquired from VMware in the Merger Agreement.  
 27 When it merged with VMware, Broadcom told its investors that VMware "pioneered the concept  
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<sup>31</sup> *Id.*, 7:34-54.

1 of virtualization.”<sup>32</sup> However, as explained herein, VMware did so by leveraging the technological  
 2 innovations of others.

3 41. On information and belief, Broadcom stands in VMware’s shoes and/or shares  
 4 liability for all infringement of the ’472 and ’102 Patents, both before and after the Merger  
 5 Agreement.

6 42. On information and belief, any and all liability for the infringement of the ’472 and  
 7 ’102 Patents held by VMware shall also be deemed held by Broadcom as a result of the Merger  
 8 Agreement.

9 43. For example, pursuant to the Merger Agreement, VMware, Inc.’s operations,  
 10 knowledge, products, product marketing/instructions, and employees are now integrated with  
 11 and/or attributable to Broadcom. Broadcom described the “anticipated synergies and economies of  
 12 scale expected from the integration of the VMware business . . . includ[ing] cost savings, operating  
 13 efficiencies and other strategic benefits projected to be achieved as a result of the VMware  
 14 Merger.”<sup>33</sup> Broadcom described the challenges of the VMware Merger as “integrating the VMware  
 15 workforce,” “integrating operations,” “integrating corporate, information technology, finance and  
 16 administrative infrastructures,” and “integrating financial forecasting and controls, procedures and  
 17 reporting cycles.”<sup>34</sup> In its IRS filings, Broadcom refers to the Transaction as the  
 18 “Broadcom/VMware Combination.”<sup>35</sup> Accordingly, on information and belief, Broadcom and  
 19 VMware are jointly and severally liable for infringement of the ’472 and ’102 Patents, including  
 20 past and future damages, as set forth in detail herein.

21 44. The ’912 Patent is infringed by Broadcom’s ethernet switching products as defined  
 22 further below (the “Broadcom Switching Accused Products”). For at least the statutory-defined  
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24 <sup>32</sup> Broadcom (AVGO) Q2 2022 Earnings Call Transcript, Motley Fool Transcribing, Fool.com  
 25 (May 26, 2022), available at <https://www.fool.com/earnings/call-transcripts/2022/06/02/broadcom-ltd-avgo-q2-2022-earnings-call-transcript/>.

26 <sup>33</sup> Broadcom SEC Form 10-Q for quarter ending on August 4, 2024, available at  
 27 <https://investors.broadcom.com/static-files/b32ea83a-0ca4-4f37-bd83-715a82ad795a> at 12.

28 <sup>34</sup> Broadcom SEC Form 10-K for fiscal year ending on October 29, 2023, available at  
<https://investors.broadcom.com/static-files/2b98b262-4fbb-4731-b3dd-88f6ca187002> at 17-18.

<sup>35</sup> Broadcom SEC Form 8937 filed on December 21, 2023, available at  
<https://investors.broadcom.com/static-files/7720c4c1-c940-4d9d-800c-66819bfdc7a0> at 2.

damages period, Broadcom has made, used, offered to sell, and/or sold the Broadcom Switching Accused Products and continues to make, use, offer to sell, and sell the Broadcom Switching Accused Products.

45. Accordingly, on information and belief, Broadcom is liable for infringement of the '912 Patent including past and future damages, as set forth in detail herein.

### **FIRST CLAIM FOR RELIEF**

#### **Infringement of U.S. Patent No. 10,331,472 (the “472 Patent”)**

46. Netflix incorporates by reference all preceding paragraphs, *supra*.

47. Broadcom and VMware, jointly and severally, have infringed, and Broadcom and VMware continue to infringe, at least Claim 6 of the '472 Patent, either literally or under the doctrine of equivalents, by making, using, selling, and/or offering for sale within the United States and/or importing into the United States products that are covered by at least Claim 6 of the '472 Patent. These products include, but are not limited to, VMware Cloud Foundation, VMware Cloud on AWS, Azure VMware Solution, Google Cloud VMware Engine, Oracle Cloud VMware Solution, IBM Cloud for VMware Solutions, Alibaba Cloud VMware Service, as well as any other products and/or services incorporating VMware NSX/NSX-T Data Center and/or VMware Avi Load Balancer (formerly VMware NSX Advanced Load Balancer)<sup>36</sup> (collectively, the “Broadcom Load Balancing Accused Products”).

48. Claim 6 of the '472 Patent recites:

A method comprising:

monitoring a first availability of a first service, the first service

having a first availability requirement and a first availability

tolerance;

detecting a reduction in the first availability of the first

<sup>36</sup> See, e.g., “Transform Your Apps and Cloud Faster with VMware Cloud,” VMware Cloud Partners, VMware.com, <https://www.vmware.com/solutions/cloud-partners/>; “Build numbers and versions of VMware NSX/NSX-T Data Center,” Broadcom.com (updated October 21, 2024), <https://knowledge.broadcom.com/external/article/317797/build-numbers-and-versions-of-vmware-nsx.html>; “VMware Avi Load Balancer Release Notifications,” Broadcom.com (updated September 10, 2024), <https://knowledge.broadcom.com/external/article/312808/vmware-avi-load-balancer-release-notific.html>.

1 service;

2 creating capacity for the first service by deactivating a second  
3 service on a first active virtual machine on a server, the second service  
4 having a second availability exceeding a second availability tolerance  
5 and having a second availability requirement lower than the first  
6 availability requirement; and

7 activating a second active virtual machine executing the first  
8 service on the server.

9 49. The Broadcom Load Balancing Accused Products perform a method comprising  
10 “monitoring a first availability of a first service, the first service having a first availability  
11 requirement and a first availability tolerance.”

12 50. For example, the Broadcom Load Balancing Accused Products include a page  
13 displaying monitored “virtual services,” which includes virtual service “health.”<sup>37</sup> The product  
14 documentation explains the health indicator “[d]isplays a numeric, color-coded health status of the  
15 virtual service,” that “[a] red exclamation mark (!) indicates that the virtual service is down,” and  
16 that “[a] dash appears if the virtual service is disabled, not deployed, or in error state.”<sup>38</sup> The  
17 Broadcom Load Balancing Accused Products also have a “minimum and maximum scale-out per  
18 virtual service” setting which “govern[s] the number of [Service Engines (SEs)] across which a  
19 virtual service can be scaled.”<sup>39</sup>

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26 <sup>37</sup> “VMware NSX Advanced Load Balancer 30.2,” Broadcom.com (last updated November 11,  
27 2024), <https://techdocs.broadcom.com/us/en/vmware-security-load-balancing/avi-load-balancer/avi-load-balancer/30-2/vmware-avi-load-balancer-configuration-guide/load-balancing-overview/virtual-services.html>.

28 <sup>38</sup> *Id.*

<sup>39</sup> *Id.*

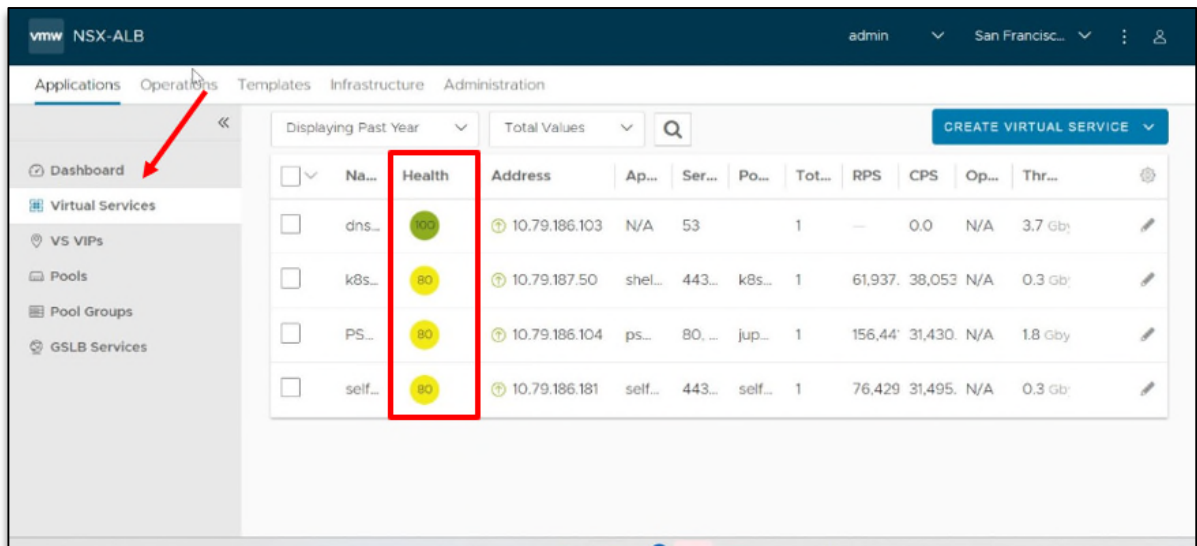


Figure 1. Screenshot from the NSX product webpage showing “virtual services” page with the “health” indicator highlighted in red.

51. The product documentation describes that the “service engines” discussed above are “data plane virtual machines:”

The Avi Service Engine, also called the Service Engine, is the data plane virtual machine. A Service Engine runs one or more virtual services. A Service Engine is managed by the controller. The controller provisions Service Engines to host virtual services.<sup>40</sup>

52. The Broadcom Load Balancing Accused Products perform the step of “detecting a reduction in the first availability of the first service.”

53. Notably, as described, a SE has “a maximum capacity for processing traffic,” meaning that as that capacity threshold is approached, the SE’s ability to accommodate new traffic is reduced—meaning the availability of virtual service(s) running on the SE is also reduced.

<sup>40</sup> “NSX Advanced Load Balancer Components,” VMware.com (updated January 27, 2022), <https://docs.vmware.com/en/VMware-vSphere/7.0/vmware-vsphere-with-tanzu/GUID-A247F5F2-AC7E-48E7-B615-F8D361C7292A.html#:~:text=The%20Avi%20Service%20Engine%2C%20also%20called%20the%20Service,controller%20provisions%20Service%20Engines%20to%20host%20virtual%20services.>



## Virtual Service Scaling

Each SE has a maximum capacity for processing traffic, typically measured in terms of traffic throughput or SSL transactions per second. The SE capacity is a function of various parameters, such as SE VM size (number of vCPUs, or memory), type of traffic, and the ecosystem in which the SE is functioning.

In the default configuration, a virtual service is placed on a single SE. However, if the SE is not sufficient to handle traffic for the virtual service, the virtual service can be scaled out to added SEs. Here, more than one SE handles traffic for the virtual service.

Scaling out or scaling in virtual services can be performed manually or automatically.

In the case of automated scaling of virtual service placements, one of the following SE parameters can be used to configure thresholds beyond which a virtual service must be scaled out to a new SE, or scaled back into fewer SEs:

- CPU utilization of the SE
- Bandwidth, in Mbps, being served by the SE
- Connections per second (CPS) being served by the SE
- Packets per second (PPS)

For more information on virtual service scaling, see Virtual Service Scaling.

Figure 2. Screenshot from the NSX product webpage describing “virtual service scaling” with description of SE maximum capacity highlighted in yellow.

54. Relatedly, in addition to the virtual service health monitoring discussed above, the Broadcom Load Balancing Accused Products use metric-based thresholds to detect a reduction in availability virtual services within an SE for the purposes of scaling out the virtual service to additional SEs (at least to maintain virtual service availability).

## Virtual Service Scaling

Each SE has a maximum capacity for processing traffic, typically measured in terms of traffic throughput or SSL transactions per second. The SE capacity is a function of various parameters, such as SE VM size (number of vCPUs, or memory), type of traffic, and the ecosystem in which the SE is functioning.

In the default configuration, a virtual service is placed on a single SE. However, if the SE is not sufficient to handle traffic for the virtual service, the virtual service can be scaled out to added SEs. Here, more than one SE handles traffic for the virtual service.

Scaling out or scaling in virtual services can be performed manually or automatically.

In the case of automated scaling of virtual service placements, one of the following SE parameters can be used to configure thresholds beyond which a virtual service must be scaled out to a new SE, or scaled back into fewer SEs:

- CPU utilization of the SE
- Bandwidth, in Mbps, being served by the SE
- Connections per second (CPS) being served by the SE
- Packets per second (PPS)

For more information on virtual service scaling, see Virtual Service Scaling.

Figure 3. Screenshot from the NSX product webpage describing “virtual service scaling” with description thresholds for “scaling out” highlighted in yellow.

1           55. As one example, when automatic scaling is enabled, the Broadcom Load  
2 Balancing Accused Products detect “when the SE CPU exceeds an 80% average” to consider  
3 whether to perform a virtual service scale out or migration operation.<sup>41</sup> After detecting that “the SE  
4 CPU exceeds an 80% average,” the Broadcom Load Balancing Accused Products determine  
5 whether “one virtual service is generating more than 70% of the PPS [(packets per second)] for the  
6 SE.”

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27 <sup>41</sup> “VMware Avi Load Balancer 30.2,” Broadcom.com (last updated October 31, 2024),  
28 <https://techdocs.broadcom.com/us/en/vmware-security-load-balancing/avi-load-balancer/avi-load-balancer/30-2/vmware-avi-load-balancer-configuration-guide/load-balancing-overview/autoscale-service-engines/automated-versus-manual-scaling.html>.

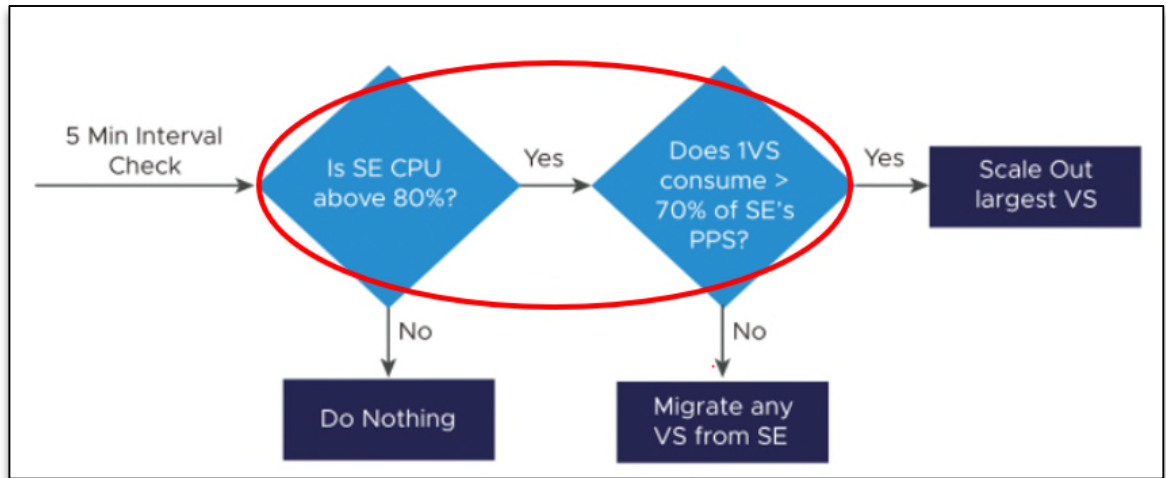


Figure 4. Screenshot from product webpage showing flowchart for automatic scaling with first branching decision highlighted in red.

56. The Broadcom Load Balancing Accused Products perform the step of “creating capacity for the first service by deactivating a second service on a first active virtual machine on a server, the second service having a second availability exceeding a second availability tolerance and having a second availability requirement lower than the first availability requirement.”

57. In the example above, if the SE CPU usage exceeds 80% and it is determined that no virtual service on the SE meets the 70% of the SE’s PPS threshold, “the Controller will elect to migrate a virtual service to another SE.”<sup>42</sup> The product documentation explains how the migration operation behaves.<sup>43</sup>

The migration process behaves similar to scaling. A new SE is added to an existing virtual service as a secondary. Shortly the Avi Load Balancer Controller will promote the secondary to become primary. The new SE will now handle all new connections, forwarding any older connections to the now secondary SE. ***After 30 seconds, the old SE will terminate the remaining connections and be removed from the virtual service configuration.***

58. The product documentation explains that, after a migration operation, “[i]f further capacity is required, the virtual service can still be scaled out to additional SEs” (discussed below).<sup>44</sup>

<sup>42</sup> *Id.*

<sup>43</sup> *Id.*

<sup>44</sup> *Id.*

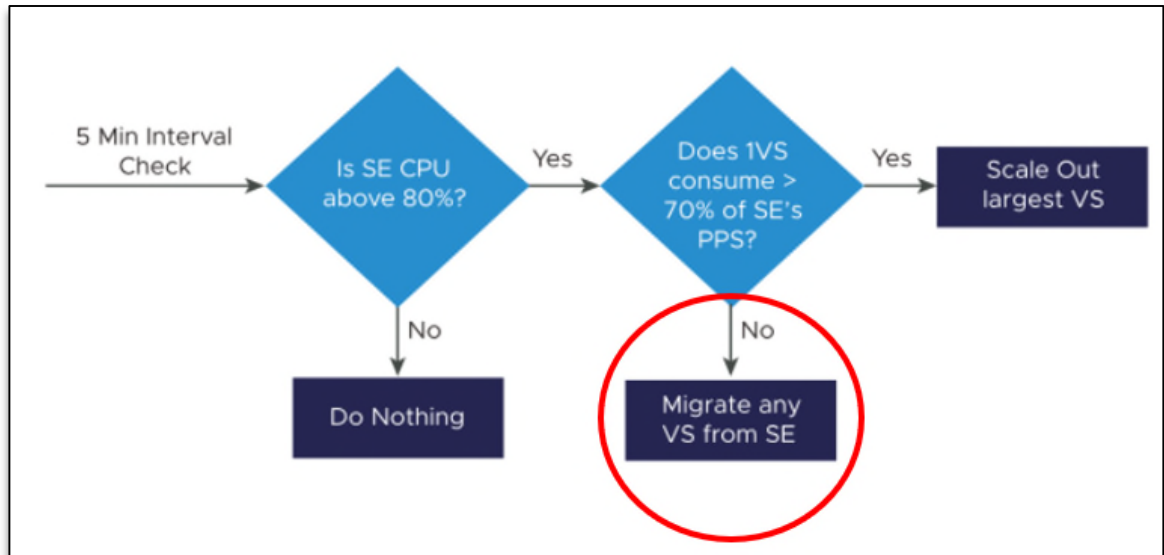


Figure 5. Screenshot from product webpage showing flowchart for automatic scaling with “migrate” outcome highlighted in red.

59. The Broadcom Load Balancing Accused Products perform the step of “activating a second active virtual machine executing the first service on the server.”

60. In the example above, if it is determined that “one virtual service is [generating] more than 70% of the PPS for the SE,” then that “virtual service will be scaled out.” The product documentation explains the scale out operation:<sup>45</sup>

As traffic increases beyond the capacity of a single SE, the Avi Load Balancer Controller can add one or more new SEs to the virtual service. These new SEs can process other virtual service traffic, or they can be newly created for this task. Existing SEs can be added within a couple of seconds, whereas instantiating a new SE VM may take up to several minutes, depending on the time necessary to copy the SE image to the virtual machine's host.

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<sup>45</sup> “VMware Avi Load Balancer 30.2,” Broadcom.com (last updated October 31, 2024), <https://techdocs.broadcom.com/us/en/vmware-security-load-balancing/avi-load-balancer/avi-load-balancer/30-2/vmware-avi-load-balancer-configuration-guide/load-balancing-overview/autoscale-service-engines.html>.

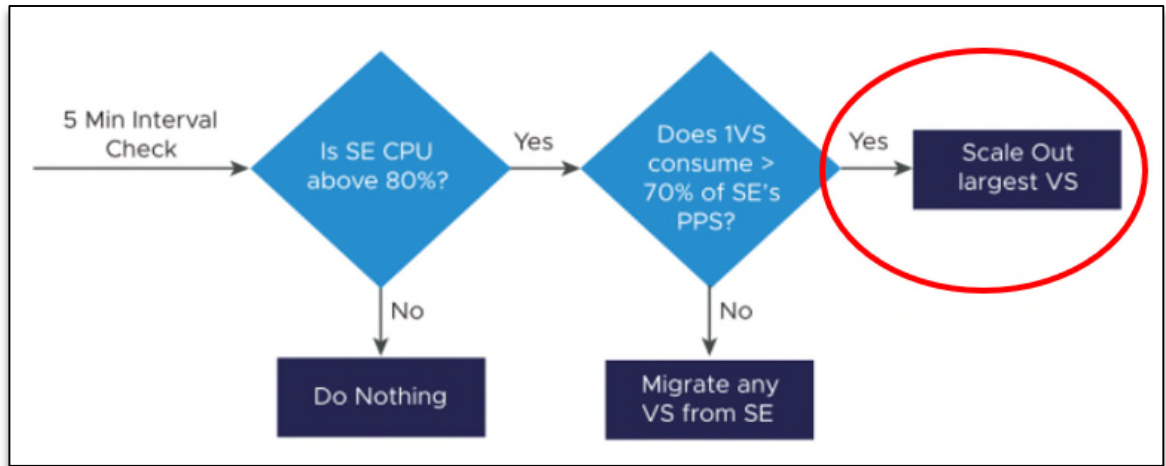


Figure 6. Screenshot from product webpage showing flowchart for automatic scaling with “scale out” outcome highlighted in red.

61. Accordingly, the Broadcom Load Balancing Accused Products perform all steps of Claim 6 of the '472 Patent.

### DIRECT INFRINGEMENT

62. Broadcom and VMware, jointly and severally, have directly infringed, and Broadcom and VMware continue to infringe the '472 Patent in multiple ways.

63. Broadcom and VMware directly infringe the '472 Patent at least when they perform the claimed methods of the '472 Patent, in violation of at least 35 U.S.C. § 271(a), by providing the Broadcom Load Balancing Accused Products as a service.



Figure 7. Annotated screenshot from VMware Cloud Tech Zone FAQ page explaining the VMware Cloud on AWS Service and how to sign up.<sup>46</sup>

64. When a customer signs up for and uses a NSX cloud-based service (e.g., VMware Cloud on AWS), Broadcom and VMware perform the claimed methods as detailed above by

<sup>46</sup> “VMware Cloud on AWS Frequently Asked Questions,” VMware.com (copyright 2005-2024), <https://www.vmware.com/docs/vmware-cloud-on-aws-frequently-asked-questions>.



1 controlling and maintaining responsibility for the infringing functionality.

2 65. Broadcom and VMware also condition the benefit of the Broadcom Load  
3 Balancing Accused Products on Broadcom and VMware’s partners performing the infringing  
4 functionality and Broadcom and VMware’s control of the manner and timing of said performance.  
5 For example, Broadcom and VMware maintain a “Shared Responsibility Model” that is “common  
6 among the different VMware Cloud Providers” and “defines distinct roles and responsibilities  
7 between the VMware Cloud Infrastructure Services provider and an organization consuming the  
8 service.”<sup>47</sup> As shown below, Broadcom and VMware maintain responsibility for the “NSX  
9 Lifecycle.” As further confirmation, when describing the AWS implementation, Broadcom and  
10 VMware describe one of the goals of the shared responsibility model as being to “[p]rotect  
11 VMware-managed objects” including “management appliances” and “hosts.”<sup>48</sup> The “management  
12 appliances” and “hosts” execute code performing the steps of Claim 6 described above.

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26 <sup>47</sup> “VMware Cloud Well-Architected Framework for VMware Cloud on AWS,” VMware.com  
27 (copyright 2023), <https://docs.vmware.com/en/VMware-Cloud-Well-Architected-Framework/services/vmcwaf-aws.pdf>.

28 <sup>48</sup> “VMware Cloud on AWS: vCenter Architecture,” VMware.com (copyright 2005-2024),  
<https://vmc.techzone.vmware.com/vmc-arch/docs/compute/vmc-aws-vcenter-architecture#sec27179-sub1>.

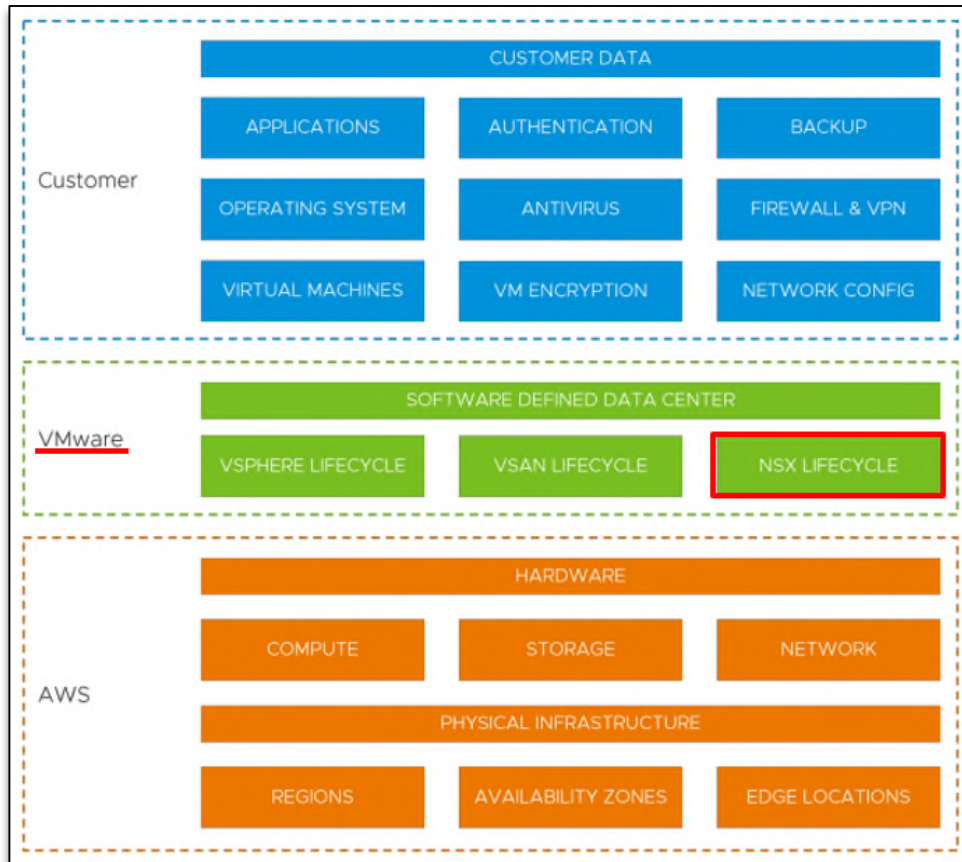


Figure 8. Annotated diagram from the “VMware Cloud Well-Architected Framework for VMware Cloud on AWS” document splitting responsibility between the customer, Broadcom/VMware, and AWS and showing NSX as a responsibility of VMware highlighted in red.

66. Broadcom and VMware also benefit from their control of the manner and timing of the user’s performance of the claimed methods. For example, Broadcom reported that VMware Cloud Foundation represented 80% of its total VMware products booking during its third fiscal quarter of 2024, from which Broadcom received \$2.5 billion in revenue.<sup>49</sup>

67. Broadcom and VMware also directly infringe by using the claimed method to demonstrate, test, install, and configure the Broadcom Load Balancing Accused Products for their customers. For example, Broadcom and VMware directly infringe by using the Broadcom Load Balancing Accused Products for demonstrating via VMware Hands-on Labs, *infra*.

#### INDIRECT INFRINGEMENT: INDUCEMENT

68. Broadcom and VMware have had actual knowledge of the ’472 Patent and their

<sup>49</sup> Broadcom (AVGO) Q3 2024 Earnings Call Transcript, Motley Fool Transcribing, Fool.com (September 5, 2024), <https://www.fool.com/earnings/call-transcripts/2024/09/05/broadcom-avgo-q3-2024-earnings-call-transcript/>.

1 infringement by the Broadcom Load Balancing Accused Products since at least December 23,  
2 2024, when Netflix sent a notice letter to Broadcom's and VMware's Legal Departments by email  
3 and/or December 27, 2024 when they were served the same letter in hard-copy. *See* Exhibit D. That  
4 letter identified the '472 Patent, the infringing products, and a brief explanation tying an example  
5 claim to the infringing activities. *See id.* Broadcom and VMware did not respond to that letter or  
6 otherwise alter its infringing conduct.

7 69. Broadcom and VMware are sophisticated entities who have engaged in extensive  
8 patent litigation across the country. For example, Broadcom has been involved in no less than 45  
9 patent cases since 2002.<sup>50</sup> As another example, Broadcom has at least 83 IP professionals in its legal  
10 department.<sup>51</sup> Broadcom and VMware had ample time to review Netflix's notice of its infringing  
11 activities and deliberately chose to not respond or alter their infringing behavior.

12 70. Broadcom and VMware, jointly and severally, have actively induced and continue to  
13 actively induce infringement of at least Claim 6 of the '472 Patent in violation of at least 35 U.S.C.  
14 § 271(b).

15 71. Broadcom and VMware's customers directly infringe at least Claim 6 of the  
16 '472 Patent when they use the Broadcom Load Balancing Accused Products in the ordinary,  
17 customary, and intended way.

18 72. Broadcom and VMware's inducement includes, without limitation and with specific  
19 intent to encourage the infringement, knowingly inducing consumers to use the Broadcom Load  
20 Balancing Accused Products within the United States in the ordinary, customary, and intended way  
21 by, directly or through intermediaries, supplying the Broadcom Load Balancing Accused Products  
22 to consumers within the United States and instructing and encouraging such customers to use the  
23 Broadcom Load Balancing Accused Products in the ordinary, customary, and intended way, which  
24 Broadcom and VMware know or should know infringes at least Claim 6 of the '472 Patent.

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26 <sup>50</sup> This information was collected from the Docket Navigator research tool by searching for the  
27 party "Broadcom Inc." Notably, this estimate does not include other Broadcom entities or  
subsidiaries.

28 <sup>51</sup> This information was collected by searching Broadcom's LinkedIn "People" tab, using the  
search "intellectual property OR patent OR trademark OR copyright," and limiting to individuals  
listed under "Legal."



1           73. For example, in some cases, Broadcom and VMware sell the Broadcom Load  
2 Balancing Accused Products to their customers as software for installation on customer  
3 computer(s).<sup>52</sup> Whenever customers install the Broadcom Load Balancing Accused Products and  
4 use them to manage virtual services, for example, with the auto-rebalance feature enabled (*e.g.*,  
5 virtual service autoscaling), at least Claim 6 of the '472 Patent is performed. Broadcom and  
6 VMware specifically intend and instruct their customers to install the Broadcom Load  
7 Balancing Accused Products to manage virtual services with, for example, the auto-rebalance  
8 feature enabled and therefore specifically intend and instruct their customers to infringe. Broadcom  
9 and VMware have provided and continue to provide these instructions to infringe despite knowing  
10 of the '472 Patent and knowing or being willfully blind to the fact these activities infringe the '472  
11 Patent.

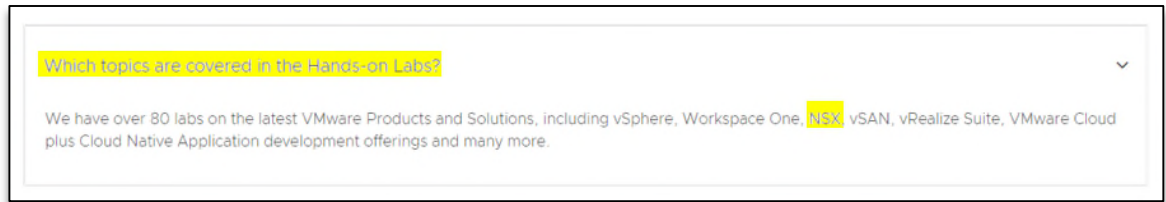
12           74. By way of example, Broadcom and VMware's instructions to their customers to  
13 infringe are made at least through their creation and distribution of marketing, promotional, and  
14 instructional materials. The promotional and product literature for the Accused Products is  
15 designed to instruct, encourage, enable, and facilitate the user of the Broadcom Load  
16 Balancing Accused Products to use the Broadcom Load Balancing Accused Products in a manner  
17 that directly infringes the '472 Patent. And Broadcom and VMware provide instructions, support,  
18 and technical assistance to their customers in support of committing the infringement.

19           75. One non-limiting example of Broadcom and VMware's inducement includes at least  
20 their creation, distribution, and instruction to customers in VMware Hands-on Labs for NSX.<sup>53</sup>  
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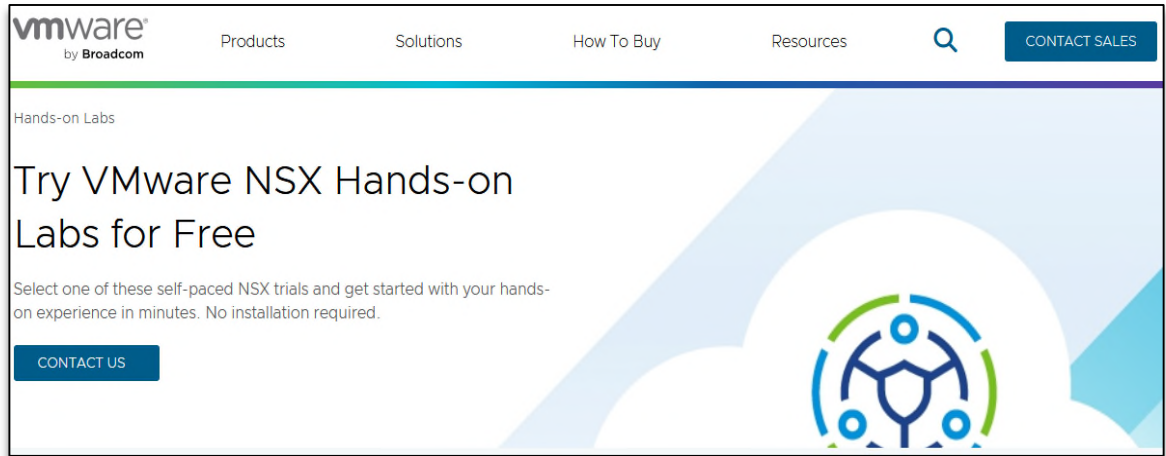
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25 <sup>52</sup> See, *e.g.*, "NSX Installation Guide," VMware.com (modified September 9, 2024),  
26 [https://docs.vmware.com/en/VMware-NSX/4.1/nsx\\_41\\_install.pdf](https://docs.vmware.com/en/VMware-NSX/4.1/nsx_41_install.pdf); VMware Avi Load Balancer  
27 Installation Guide, VMware Avi Load Balancer 30.2, VMware.com (copyright 2024),  
<https://docs.vmware.com/en/VMware-Avi-Load-Balancer/30.2/Installation-Guide.pdf>.

28 <sup>53</sup> See, *e.g.*, "Try VMware NSX Hands-on Labs for Free," VMware.com  
<https://www.vmware.com/info/nsx/hol>; FAQ, VMware.com,  
<https://www.vmware.com/resources/hands-on-labs/faq>.



*Figure 9. Screenshot from VMware Hands-on Lab FAQ page showing application to NSX products.*



*Figure 10. Screenshot from VMware NSX Hands-on Lab page offering customers the chance to experience NSX in minutes.*

76. On the official VMware YouTube page, Broadcom and VMware explain that VMware Hands-On Labs “delivers a real virtualized infrastructure in the cloud powered by VMware” to let customers “try out products from the convenience of [their] browser.”<sup>54</sup> It is further explained that “each self-paced lab is guided with a manual and built in modules so you can take all or just part of a lab and come and go from labs as often as you like.”<sup>55</sup>

<sup>54</sup> “What are VMware Hands-on Labs?,” VMware YouTube Channel, YouTube.com (June 25, 2014), [https://www.youtube.com/watch?v=XggYeVsK\\_R0](https://www.youtube.com/watch?v=XggYeVsK_R0), 0:25-32.

<sup>55</sup> *Id.*, 0:34-42.

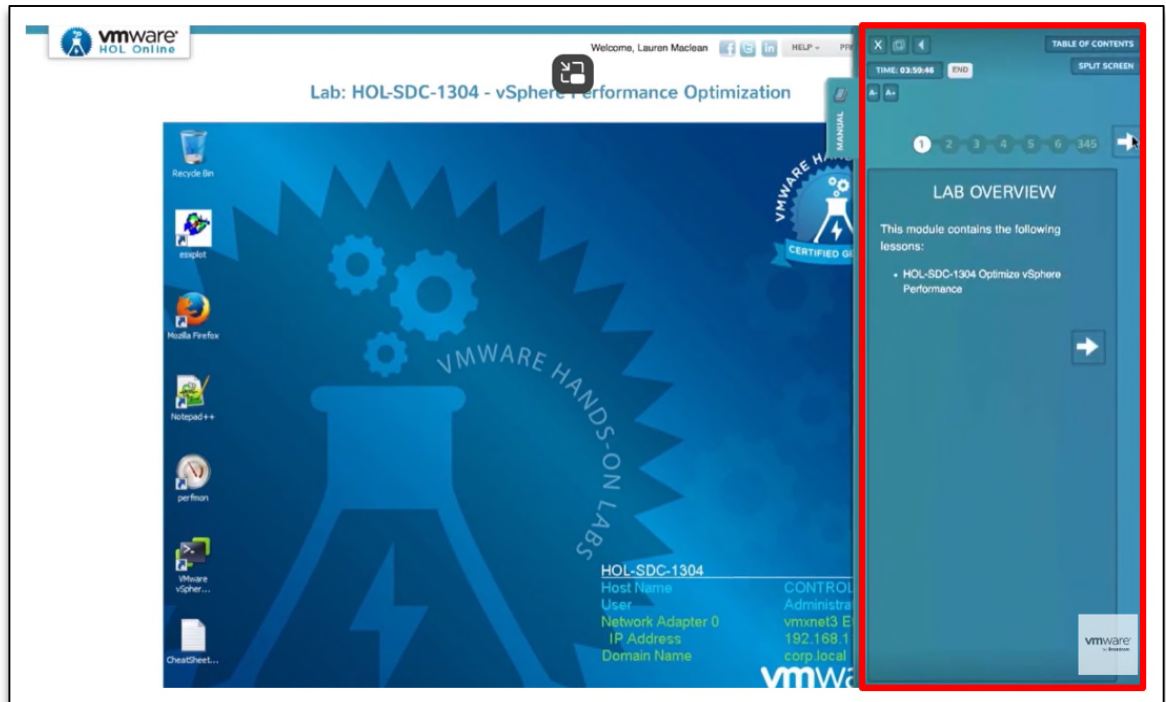


Figure 11. Screenshot from VMware YouTube video titled “What are VMware Hands-on Labs?,” showing VMware Hands-on Lab Environment highlighted with in-lab manual highlighted in red.

77. Broadcom and VMware offer VMware Hands-on Labs directly related to use of NSX functionality that infringes the ’102 Patent. For example, a VMware Hands-on Lab is offered on “Getting started with VMware Avi load balancer (HOL-2571-01-ANS-L),” which it describes as allowing users to “[e]xplore VMware Avi Load Balancer to see how easy it is to apply load balancing and application-aware security to any application in a multi-cloud environment.” This exemplary lab has specific modules on “Avi architecture,” “Applications (Virtual Services and Related Components),” and “Application Scaling.”

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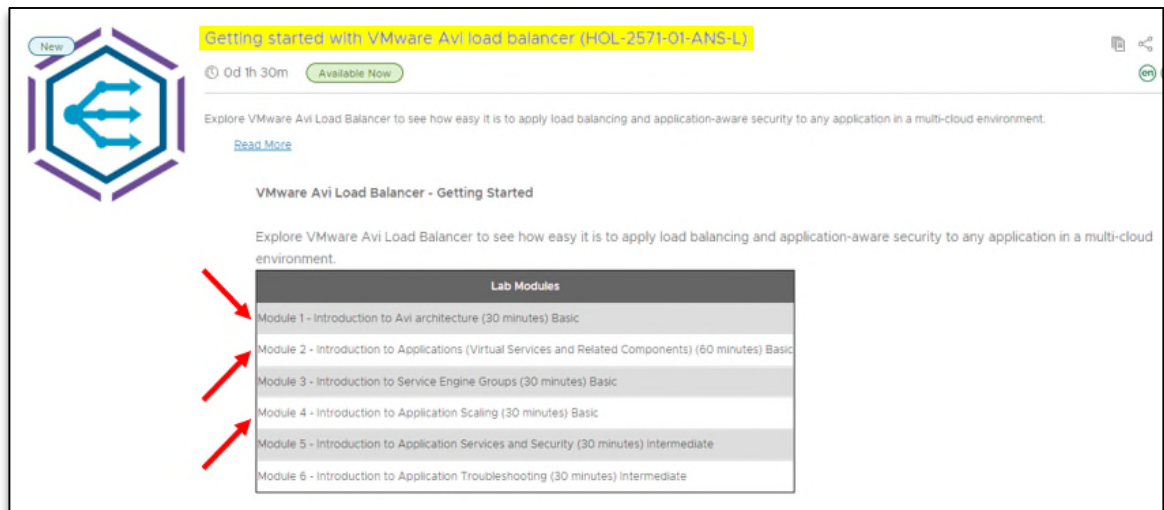


Figure 12. Screenshot from VMware Hands-on Lab Catalog for “Getting started with VMware Avi load balancer (HOL-2571-01-ANS-L)” with the title highlighted in yellow and red arrows highlighting specific modules.

78. Broadcom and VMware thus encourage their customers to infringe the '472 Patent at least by instructing customers on how to infringe by providing “manuals and built in modules” in proximity to “actual VMware products” for customers to practice infringing conduct through the VMware Hands-on Labs.

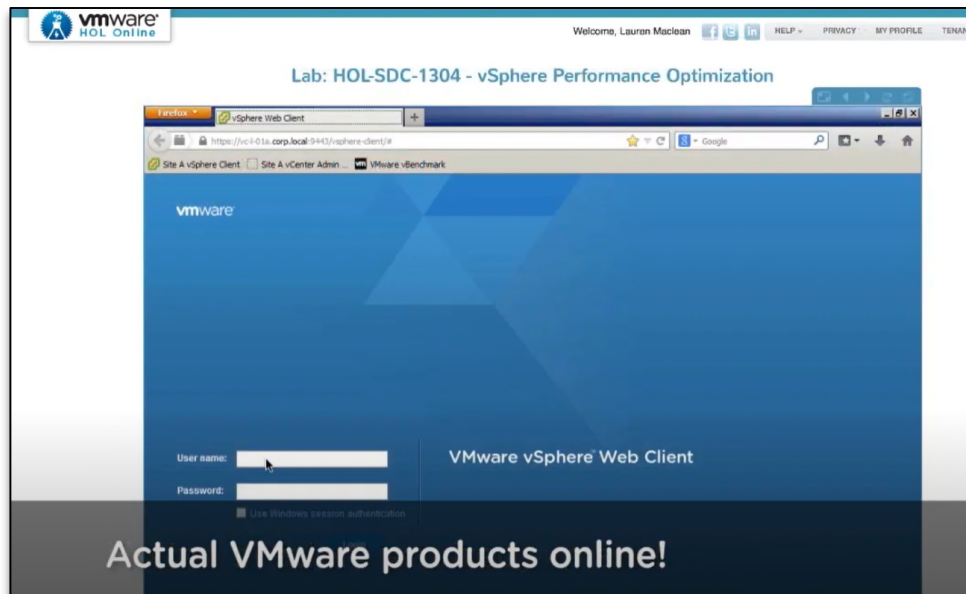


Figure 13. Screenshot from VMware YouTube video titled “What are VMware Hands-on Labs?”

79. Besides the VMware Hand-on Labs example discussed above, Broadcom and VMware publicly share numerous instructions, troubleshooting manuals, and product documentations through Broadcom’s support portal (<https://support.broadcom.com/>) and at <https://techdocs.broadcom.com/us/en/vmware-security-load-balancing/avi-load-balancer.html>.

1           80. Like the Hands-on Labs discussed above, these support documents also provide step-  
2 by-step instructions explaining how to use the Broadcom Load Balancing Accused Products in an  
3 infringing manner.

4           81. Thus, Broadcom and VMware have induced their customers to infringe the  
5 '472 Patent. Broadcom and VMware's knowing inducement of their customers to infringe has  
6 caused and continues to cause damage to Netflix, and Netflix is entitled to recover damages  
7 sustained as a result of Broadcom and VMware's wrongful acts in an amount subject to proof at  
8 trial.

9                   **INDIRECT INFRINGEMENT: CONTRIBUTORY INFRINGEMENT**

10           82. Broadcom and VMware have actively contributed to infringement of at least Claim 6  
11 of the '472 Patent in violation of at least 35 U.S.C. § 271(c). Broadcom and VMware sell the  
12 Broadcom Load Balancing Accused Products, which include components specially made or  
13 especially adapted to practice the method claimed in at least Claim 6 of the '472 Patent.

14           83. The infringing components of the Broadcom Load Balancing Accused Products have  
15 no substantial function or use other than to practice the invention claimed in at least Claim 6 of the  
16 '472 Patent at least because infringement of the claimed method is performed automatically when  
17 customers use the Broadcom Load Balancing Accused Products installed on a computer system  
18 with the auto-rebalance feature enabled.

19           84. The Broadcom Load Balancing Accused Products include material components of  
20 the claimed method recited in at least Claim 6 of the '472 Patent and are not a staple article or  
21 commodity of commerce, including because they are specifically configured to infringe according  
22 to at least Claim 6 of the '472 Patent (*see* ¶¶ 46-67).

23           85. Broadcom and VMware's contributory infringements include, without limitation,  
24 making, offering to sell, and/or selling within the United States, and/or importing into the United  
25 States, the Broadcom Load Balancing Accused Products, which each include one or more  
26 components for use in practicing at least Claim 6 of the '472 Patent, knowing the component(s) to  
27 be especially made or especially adapted for use in an infringement of at least Claim 6 of the  
28 '472 Patent (*see* ¶¶ 46-83), and not a staple article or commodity of commerce suitable for

1 substantial non-infringing use.

## 2 **WILLFUL INFRINGEMENT**

3 86. As detailed above, Broadcom and VMware had knowledge of the '472 Patent and  
4 had knowledge, or were willfully blind, as to Broadcom's and VMware's infringement of the '472  
5 Patent.

6 87. Broadcom and VMware's infringement of the '472 Patent has been and is willful and  
7 deliberate.

8 88. As discussed above, Broadcom and VMware have had actual knowledge of the '472  
9 Patent since at least December 23, 2024, when Netflix sent a notice letter to Broadcom's and  
10 VMware's Legal Departments by email and/or December 27, 2024 when they were served the same  
11 letter in hard-copy.

12 89. As discussed above, Broadcom knew or should have known that its actions infringe  
13 and actively induce infringement of the '472 Patent.

14 90. As discussed above, Broadcom specifically intended that both itself and/or its  
15 customers infringe the '472 Patent.

16 91. Broadcom and VMware's willfulness is further evidenced by VMware's  
17 demonstrated culture of knowingly using patented technology.<sup>56</sup> Copying other people's patents is  
18 circumstantial evidence of willful infringement and it appears the Accused Products are copies of  
19 the Asserted Patents. Further, VMware's former CEO, who served in that role for ten (10) years,  
20 from October 2013 to December 2023, allegedly testified in deposition that VMware has a culture  
21 of copying.<sup>57</sup> Upon information and belief, Broadcom continues VMware's culture of copying  
22 today.

23 92. Broadcom and VMware's willfulness is further evidenced by VMware's culture of  
24 willful blindness toward patents, including intentionally not reviewing third-party patents when  
25 any rational actor would understand—based on, for example, the application rejections in  
26

27 <sup>56</sup> See, e.g., *Cirba Inc. (d/b/a Densify) v. VMware, Inc.*, Case No. 1:19-cv-00742-GBW ("Cirba"),  
28 ECF 1528; 1:19-cv-00742-GBW ECF 1848.

<sup>57</sup> *Cirba*, 1:19-cv-00742-GBW ECF 1529, 1531.



1 VMware’s patent applications—that a substantial risk of infringement exists.<sup>58</sup> Upon information  
2 and belief, Broadcom continues that culture today.

3 93. In fact, two separate juries have found VMware committed willful infringement, in  
4 part, because of VMware’s culture of copying and refusing to review third-party patents during a  
5 time period relevant to this matter.<sup>59</sup> Upon information and belief, Broadcom continues the pattern  
6 and practice of willful infringement today.

7 94. Thus, Broadcom and VMware have willfully infringed the ’472 Patent. Broadcom  
8 and VMware’s knowing and willful infringement has caused and continues to cause damage to  
9 Netflix, and Netflix is entitled to recover damages sustained as a result of Broadcom and VMware’s  
10 wrongful acts in an amount subject to proof at trial.

## 11 **SECOND CLAIM FOR RELIEF**

### 12 **Infringement of U.S. Patent No. 7,313,102 (the “’102 Patent”)**

13 95. Netflix incorporates by reference all preceding paragraphs, *supra*.

14 96. Broadcom and VMware, jointly and severally, have infringed and continue to  
15 infringe, at least Claim 1 of the ’102 Patent, either literally or under the doctrine of equivalents, by  
16 making, using, selling, and/or offering for sale within the United States and/or importing into the  
17 United States products that are covered by at least Claim 1 of the ’102 Patent. These products  
18 include, but are not limited to, VMware Cloud Foundation, VMware Cloud on AWS, Azure  
19 VMware Solution, Google Cloud VMware Engine, Oracle Cloud VMware Solution, IBM Cloud  
20 for VMware Solutions, Alibaba Cloud VMware Service, as well as any other products and/or  
21 services incorporating VMware NSX/NSX-T Data Center<sup>60</sup> (collectively, the “’102 Accused  
22 Products”).

23 97. Claim 1 of the ’102 Patent recites:

24 <sup>58</sup> See, e.g., *Cirba*, ECF Nos. 1529, ECF 1531, ECF 1848.

25 <sup>59</sup> *Cirba Inc. (d/b/a Densify) v. VMware, Inc.*, Case No. 1:19-cv-00742-GBW, ECF Nos. 577,  
26 1785.

27 <sup>60</sup> See, e.g., “Transform Your Apps and Cloud Faster with VMware Cloud,” VMware Cloud  
28 Partners, VMware.com, <https://www.vmware.com/solutions/cloud-partners/>; “Build numbers and  
versions of VMware NSX/NSX-T Data Center,” Broadcom.com (updated October 21, 2024),  
<https://knowledge.broadcom.com/external/article/317797/build-numbers-and-versions-of-vmware-nsx.html>.

1 A method for provisioning subnets, the method comprising:  
2 grouping the subnets into subnet groups based on logical  
3 properties of the subnets;  
4 assigning to each network consumer those subnet groups that  
5 are accessible to that network consumer; and  
6 providing for constrained selection of a particular subnet by a  
7 network consumer accomplished by way of a graphical user interface  
8 with selectable fields, wherein the constrained selection includes (i)  
9 selecting a public or private type address space, (ii) if applicable,  
10 selecting a gateway device from amongst those gateway devices that  
11 are accessible to the network consumer, and (iii) selecting a subnet  
12 group from those subnet groups that are accessible to the network  
13 consumer, and (iv) selecting a subnet mask that represents a size of  
14 the particular subnet.

15 98. The '102 Accused Products perform a method for provisioning subnets comprising  
16 “grouping the subnets into subnet groups based on logical properties of the subnets.”

17 99. Broadcom and VMware’s NSX Administration Guide provides instructions for  
18 configuring and managing networking for VMware NSX.<sup>61</sup> The NSX Administration Guide  
19 explains that “NSX Virtual Private Clouds (VPCs) is an abstraction layer that simplifies setting up  
20 self-contained virtual private cloud networks within an NSX project to consume networking and  
21 security services in a self-service consumption model.” Within VPCs, users “can add subnets  
22 (networks) inside the NSX VPC that is assigned to them” where the “[s]ubnets are realized as  
23 overlay segments in the default transport zone of the project.”<sup>62</sup> NSX provides for selecting from  
24 two groups of subnets based on the logical properties of the subnets. For example, NSX supports  
25 both tier-0 and tier-1 subnets.

26  
27 <sup>61</sup> “NSX Administration Guide,” VMware.com (modified October 9, 2024),  
28 [https://docs.vmware.com/en/VMware-NSX/4.2/nsx\\_42\\_admn.pdf](https://docs.vmware.com/en/VMware-NSX/4.2/nsx_42_admn.pdf).

<sup>62</sup> *Id.*



If you configure route redistribution for the tier-0 gateway, you can select from two groups of sources: tier-0 subnets and advertised tier-1 subnets. The sources in the tier-0 subnets group are:

Source Type	Description
Connected Interfaces and Segments	Redistribute all subnets configured on Interfaces and routes related to tier-0 segments, tier-0 DNS Forwarder IP, tier-0 IPsec Local IP, tier-0 NAT types. Redistribute subnets configured on segments connected to tier-0.

*Figure 14. Annotated NSX Administrator Guide discussing the tier-0 subnet group.*

The sources in the advertised tier-1 and VPC subnets group are:

Source Type	Description
Connected Interfaces & Segments / VPC Subnets	<ul style="list-style-type: none"> <li>■ Redistribute subnets configured on segments and advertised from the connected tier-1 gateway.</li> <li>■ Redistribute subnets configured in NSX VPC and advertised from the connected NSX VPC.</li> <li>■ NSX VPC advertises all its public subnets to the connected tier-0 gateway.</li> </ul>

*Figure 15. Annotated NSX Administrator Guide discussing the tier-1 subnet group.*

100. Broadcom and VMware explain that a “Tier-0 [logical router (LR)] connects to one or more physical routers northbound using Uplink Port and connects to Tier-1 LR or directly to logical switches southbound via a downlink port” while a “Tier-1 LR connects to a Tier-0 LR (this link is known as RouterLink) northbound and it connects to one or more logical switches southbound using Downlink port.”<sup>63</sup>

101. The ’102 Accused Products perform the step of “assigning to each network consumer those subnet groups that are accessible to that network consumer.”

102. As discussed above, through NSX, users “can add subnets (networks) inside the NSX VPC that is assigned to them.”<sup>64</sup>

<sup>63</sup> Amit Aneja, “NSX-T: Multi-Tiered Routing Architecture,” VMware.com (February 20, 2018), <https://blogs.vmware.com/networkvirtualization/2018/02/nsx-t-multi-tiered-routing-architecture.html>.

<sup>64</sup> “NSX Administration Guide,” VMware.com (modified October 9, 2024), [https://docs.vmware.com/en/VMware-NSX/4.2/nsx\\_42\\_admn.pdf](https://docs.vmware.com/en/VMware-NSX/4.2/nsx_42_admn.pdf).

For example:

VPC Name	VPC Users	IP Address Blocks
Order Management	Jim: VPC Admin	Private IPv4 block: 172.16.0.0/24 External IPv4 block: 192.168.1.0/24
	Bob: Network Operator	
	Carol: Security Operator	
Analytics	Mike: VPC Admin	Private IPv4 block: 172.18.0.0/24 External IPv4 block: 192.168.1.0/24
	Steve: Network Operator	
	Maria: Security Operator	

After roles are assigned to the NSX VPC users, these users can add subnets inside the NSX VPC and configure security policies for these workloads. The security policies impact only the workloads within the NSX VPC and not outside the NSX VPC.

Figure 16. Annotated NSX Administrator Guide discussing user's ability to add subnets inside the NSX VPC.<sup>65</sup>

103. The '102 Accused Products perform the step of “providing for constrained selection of a particular subnet by a network consumer accomplished by way of a graphical user interface with selectable fields, wherein the constrained selection includes (i) selecting a public or private type address space, (ii) if applicable, selecting a gateway device from amongst those gateway devices that are accessible to the network consumer, and (iii) selecting a subnet group from those subnet groups that are accessible to the network consumer, and (iv) selecting a subnet mask that represents a size of the particular subnet.”

104. When adding a subnet, the user can specify the following subnet properties: name, access mode, IP assignment, size, IP CIDR, and an optional description.

<sup>65</sup> “NSX Virtual Private Clouds,” VMware.com (updated April 26, 2024), <https://docs.vmware.com/en/VMware-NSX/4.2/administration/GUID-45670D79-7CBE-424D-B1D3-B9BB3B6D8C88.html>.

5. Click **Add Subnet**.

6. Configure the subnet properties.

Property	Description
Name	Enter a name for the subnet.
Access Mode	<p>Select any one of these access modes: Private, Public, Isolated.</p> <p>To learn more these access modes, see the <a href="#">Access Modes for NSX VPC Subnets</a> section in <a href="#">NSX Virtual Private Clouds</a>.</p> <p>By default, private is selected.</p>
IP Assignment	<p>By default, <b>Automatic</b> IP assignment is set for private and public subnets. It means that the system will assign an IPv4 CIDR for the subnet automatically. For a public subnet, the CIDR is assigned from the external IPv4 blocks of the NSX VPC. For a private subnet, the CIDR is assigned from the private IPv4 blocks of the NSX VPC.</p> <p>For isolated subnets, only <b>Manual</b> IP assignment mode is supported.</p> <p>In <b>Manual</b> IP assignment mode, you must enter a valid IPv4 CIDR for the subnet.</p>
Size	<p>This property is applicable only when you select the <b>Automatic</b> IP assignment mode.</p> <p>Select a size from the drop-down menu. System reserves four IP addresses for internal use, such as subnet network address, subnet gateway address, subnet broadcast address, DHCP server address.</p> <p>For example, if you select size as <b>32</b>, you can attach a maximum of 28 workloads to the subnet.</p>
IP CIDR	<p>This property is applicable only when you select the <b>Manual</b> IP assignment mode.</p> <p>Enter the IPv4 subnet address in a CIDR format. For example, 172.16.0.1/24</p> <p>You can enter only one IPv4 CIDR. If the IPv4 CIDR that you entered is invalid or unavailable for assignment, the system throws an appropriate error message. You must enter a different IPv4 CIDR until the system accepts it.</p>
Description	Optionally, enter a description for the subnet.

*Figure 17. NSX Administrator Guide discussing subnet properties.*

105. For example, as shown above in Figure 17, a user can specify whether the subnet uses a public, private, or isolated access mode. In a public subnet, “the IPv4 addresses in the public subnets are reachable both from the project and outside the project.”<sup>66</sup> In contrast, “[w]orkloads on an isolated subnet can communicate with each other but cannot communicate with workloads on private or public subnets within the same NSX VPC” while “[w]orkloads that are attached to a private subnet can communicate with workloads on other private or public subnets within the same NSX VPC.”<sup>67</sup> Figure 18 shows a user is able to specify a subnet within the IP address blocks made accessible to that user. Additionally, a user can select a size of the subnet from a drop-down menu. In at least some implementations of NSX, a user could also provision a subnet and specify the gateway IP:

<sup>66</sup> *Id.*

<sup>67</sup> *Id.*

The screenshot displays the 'Set Subnets' configuration page. At the top, there's a tab for 'IP Address Pool Subnets'. Below this, a table lists existing subnets. A modal form is open for adding a new subnet. The form includes a 'Source' column and an 'IP Ranges / Block' column. The 'IP Ranges' field contains '172.31.102.31-172.31.102.40'. Below it, a text input field is labeled 'Enter IPv4 or IPv6 Ranges' with an example: 'Example: IPv4 Range - 192.168.12.1-192.168.12.60, IPv6 Range - 2001:800::-2001:0fff:ffff:ffff:ffff:ffff:ffff:ffff'. The 'CIDR' field contains '172.31.102.0/24' and the 'Gateway IP' field contains '172.31.102.1'. At the bottom of the form are 'ADD' and 'CANCEL' buttons. At the bottom right of the page are 'CANCEL' and 'APPLY' buttons.

Figure 18. Showing support for Gateway IP specification as part of subnet provisioning in Broadcom's NSX.<sup>68</sup>

106. Broadcom and VMware's documents show that the subnet is successfully provisioned as overlay segments in the default transport zone of the project:

[remainder of page intentionally left blank]

<sup>68</sup> "NSX-T: Configure NSX-T Manager 2.5," TheOddAngryShot.com (April 28, 2020), <https://theoddangryshot.com/post/2020/nsxt-configure-nsxt-manager/>. See also NSX-T Installation Series: Step 5 – Create IP Pool, ShuttleTitan.com (December 22, 2019), <https://shuttletitan.com/nsx-t/nsx-t-installation-series/nsx-t-installation-series-step-5-create-ip-pool/>.

**Results**

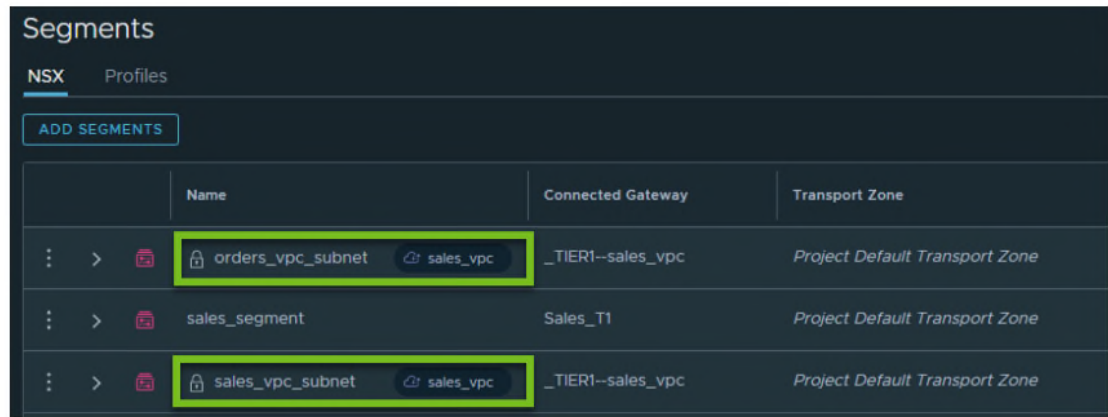
When a subnet is realized successfully in the NSX VPC, the **Status** column shows **Successful**.

Subnets in an NSX VPC are realized as overlay segments in the default transport zone of the project.

An Enterprise Admin or a Project Admin can view these overlay segments by doing these steps:

- 1 Ensure that you are in the project view.
- 2 Navigate to **Networking > Segments**.
- 3 Click the **VPC realized objects** check box at the bottom of the **Segments** page.

For example:



	Name	Connected Gateway	Transport Zone
⋮ > [icon]	orders_vpc_subnet sales_vpc	_TIER1--sales_vpc	Project Default Transport Zone
⋮ > [icon]	sales_segment	Sales_T1	Project Default Transport Zone
⋮ > [icon]	sales_vpc_subnet sales_vpc	_TIER1--sales_vpc	Project Default Transport Zone

Figure 19. NSX Administrator Guide discussing admin roles.<sup>69</sup>

107. Accordingly, the '102 Accused Products perform all steps of Claim 1 of the '102 Patent.

### DIRECT INFRINGEMENT

108. Broadcom and VMware directly infringe the '102 Patent in multiple ways.

109. Broadcom and VMware directly infringe the '102 Patent when they perform the claimed methods of the '102 Patent, in violation of at least 35 U.S.C. § 271(a), by providing the '102 Accused Products as a service.

[remainder of page intentionally left blank]

<sup>69</sup> "Add a Subnet in an NSX VPC," VMware.com (updated February 15, 2024), <https://docs.vmware.com/en/VMware-NSX/4.2/administration/GUID-CC2A7BC0-3021-4312-AF8C-941A995EE8E5.html>.





Figure 20. Annotated screenshot from VMware Cloud Tech Zone FAQ page explaining the VMware Cloud on AWS Service and how to sign up.

110. When a customer signs up for and uses a NSX cloud-based service (e.g., VMware Cloud on AWS), Broadcom and VMware perform the claimed methods as discussed above by controlling and maintaining responsibility for the infringing functionality. Alternatively, Broadcom and VMware condition the benefit of the '102 Accused Products on Broadcom's partners performing the infringing functionality and Broadcom and VMware's control of the manner and timing of said performance.

111. For example, Broadcom and VMware maintain a "Shared Responsibility Model" that is "common among the different VMware Cloud Providers" and "defines distinct roles and responsibilities between the VMware Cloud Infrastructure Services provider and an organization consuming the service."<sup>70</sup> As shown below, Broadcom and VMware maintain responsibility for the "vSphere Lifecycle." As further confirmation, when describing the AWS implementation, Broadcom and VMware describe one of the goals of the shared responsibility model as being to "[p]rotect VMware-managed objects" including "management appliances" and "hosts."<sup>71</sup> The "management appliances" and "hosts" execute code performing the steps of Claim 1 described above.

<sup>70</sup> "VMware Cloud Well-Architected Framework for VMware Cloud on AWS," VMware.com (copyright 2023), <https://docs.vmware.com/en/VMware-Cloud-Well-Architected-Framework/services/vmcwaf-aws.pdf>.

<sup>71</sup> "VMware Cloud on AWS: vCenter Architecture," VMware.com (copyright 2005-2024), <https://vmc.techzone.vmware.com/vmc-arch/docs/compute/vmc-aws-vcenter-architecture#sec27179-sub1>.

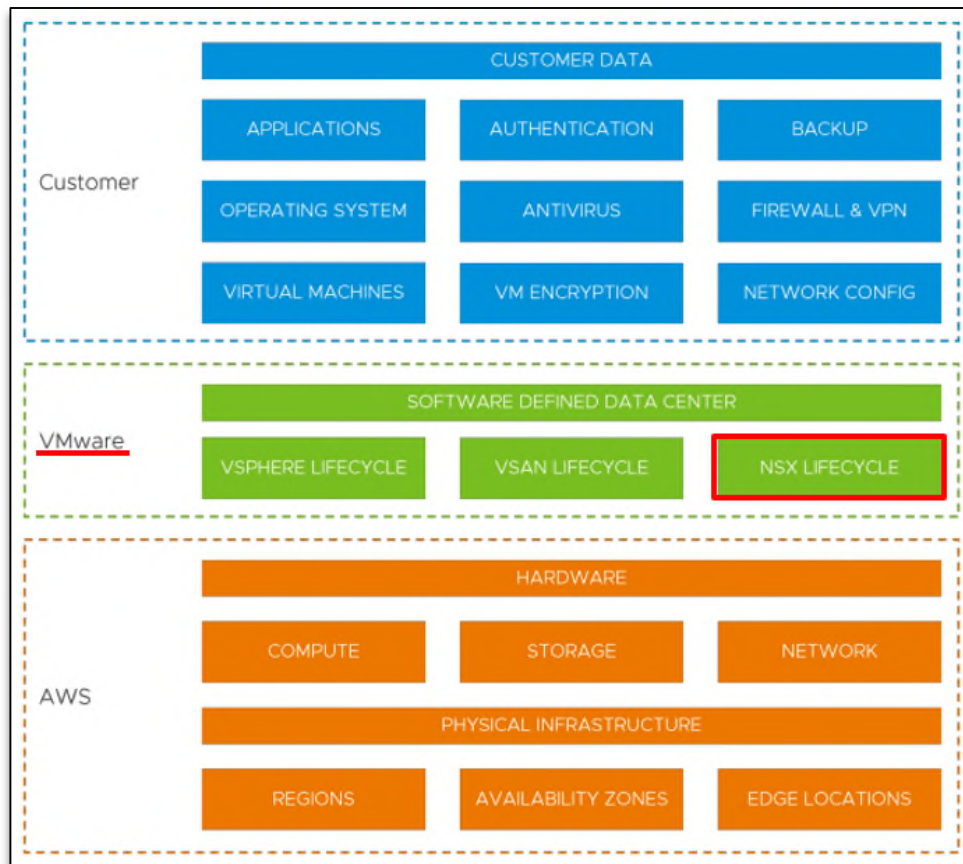


Figure 21. Annotated diagram from the “VMware Cloud Well-Architected Framework for VMware Cloud on AWS” document splitting responsibility between the customer, VMware, and AWS and showing vSphere as a responsibility of VMware highlighted in red.

As noted above, Broadcom and VMware also benefit from their control of the manner and timing of the user’s performance of the claimed methods because, for example, Broadcom received \$2.5 billion in revenue based on VMware Cloud Foundation.<sup>72</sup>

112. Broadcom and VMware also directly infringe by using the claimed method to demonstrate, test, install, and configure the ’102 Accused Products for their customers. For example, Broadcom directly infringes by using the ’102 Accused Products for demonstrating via VMware Hands-on Labs, *infra*.

#### INDIRECT INFRINGEMENT: INDUCEMENT

113. Broadcom and VMware have had actual knowledge of the ’102 Patent and their infringement by the ’102 Accused Products since at least December 23, 2024, when Netflix sent a

<sup>72</sup> Broadcom (AVGO) Q3 2024 Earnings Call Transcript, Motley Fool Transcribing, Fool.com (September 5, 2024), <https://www.fool.com/earnings/call-transcripts/2024/09/05/broadcom-avgo-q3-2024-earnings-call-transcript/>.

1 notice letter to Broadcom's and VMware's Legal Departments. *See* Exhibit D. That letter identified  
2 the '102 Patent, the infringing products, and a brief explanation tying an example claim to the  
3 infringing activities. *See id.* Broadcom and VMware did not respond to that letter or otherwise alter  
4 its infringing conduct.

5 114. Broadcom and VMware are sophisticated entities who have engaged in extensive  
6 patent litigation across the country. For example, Broadcom has been involved in no less than 45  
7 patent cases since 2002.<sup>73</sup> As another example, Broadcom has at least 83 IP professionals in its  
8 legal department.<sup>74</sup> Broadcom and VMware had ample time to review Netflix's notice of its  
9 infringing activities and deliberately chose to not respond or alter their infringing behavior.

10 115. Broadcom and VMware, jointly and severally, have actively induced and continue to  
11 actively induce infringement of at least Claim 1 of the '102 Patent in violation of at least 35 U.S.C.  
12 § 271(b).

13 116. Broadcom and VMware's customers directly infringe at least Claim 1 of the  
14 '102 Patent when they use the '102 Accused Products in the ordinary, customary, and intended  
15 way. Broadcom and VMware's inducements include, without limitation and with specific intent to  
16 encourage the infringement, knowingly inducing consumers to use the '102 Accused Products  
17 within the United States in the ordinary, customary, and intended way by, directly or through  
18 intermediaries, supplying the '102 Accused Products to consumers within the United States and  
19 instructing and encouraging such customers to use the '102 Accused Products in the ordinary,  
20 customary, and intended way, which Broadcom knows or should know infringes at least Claim 1  
21 of the '102 Patent.

22 117. Broadcom and VMware sell the '102 Accused Products as software for installation  
23 on customer computer(s).<sup>75</sup> When Broadcom's customers install the '102 Accused Products and

24 \_\_\_\_\_  
25 <sup>73</sup> This information was collected from the Docket Navigator research tool by searching for the  
26 party "Broadcom Inc." Notably, this estimate does not include other Broadcom entities or  
27 subsidiaries.

28 <sup>74</sup> This information was collected by searching Broadcom's LinkedIn "People" tab, using the  
search "intellectual property OR patent OR trademark OR copyright," and limiting to individuals  
listed under "Legal."

<sup>75</sup> *See, e.g.,* "NSX Installation Guide," VMware.com (modified September 9, 2024),  
[https://docs.vmware.com/en/VMware-NSX/4.1/nsx\\_41\\_install.pdf](https://docs.vmware.com/en/VMware-NSX/4.1/nsx_41_install.pdf); VMware Avi Load Balancer



provision a subnet, at least Claim 1 of the '102 Patent is performed. In at least this way, the customers of Broadcom directly infringe the '102 Patent *while* Broadcom and VMware know of the '102 Patent, know or should know that these activities infringe the '102 Patent, and specifically intend and instruct for their customers to infringe. Broadcom and VMware have provided and continue to provide these instructions to infringe despite knowing of the '102 Patent and knowing or being willfully blind to the fact these activities infringe the '102 Patent.

118. Broadcom and VMware's instructions to their customers to infringe are made at least through their creation and distribution of marketing, promotional, and instructional materials. The promotional and product literature for the Accused Products is designed to instruct, encourage, enable, and facilitate the user of the '102 Accused Products to use the '102 Accused Products in a manner that directly infringes the '102 Patent. And Broadcom and VMware provide instructions, support, and technical assistance to their customers in support of committing the infringement.

119. One non-limiting example of Broadcom and VMware's inducement includes at least VMware Hands-on Labs for NSX-based products.<sup>76</sup>

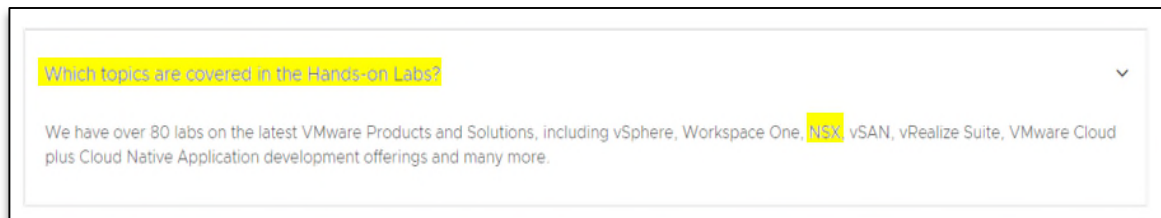


Figure 22. Screenshot from VMware Hands-on Lab FAQ page showing application to NSX products.

Installation Guide, VMware Avi Load Balancer 30.2, VMware.com (copyright 2024), <https://docs.vmware.com/en/VMware-Avi-Load-Balancer/30.2/Installation-Guide.pdf>.

<sup>76</sup> See, e.g., "Try VMware NSX Hands-on Labs for Free," VMware.com <https://www.vmware.com/info/nsx/hol>; FAQ, VMware.com, <https://www.vmware.com/resources/hands-on-labs/faq>.

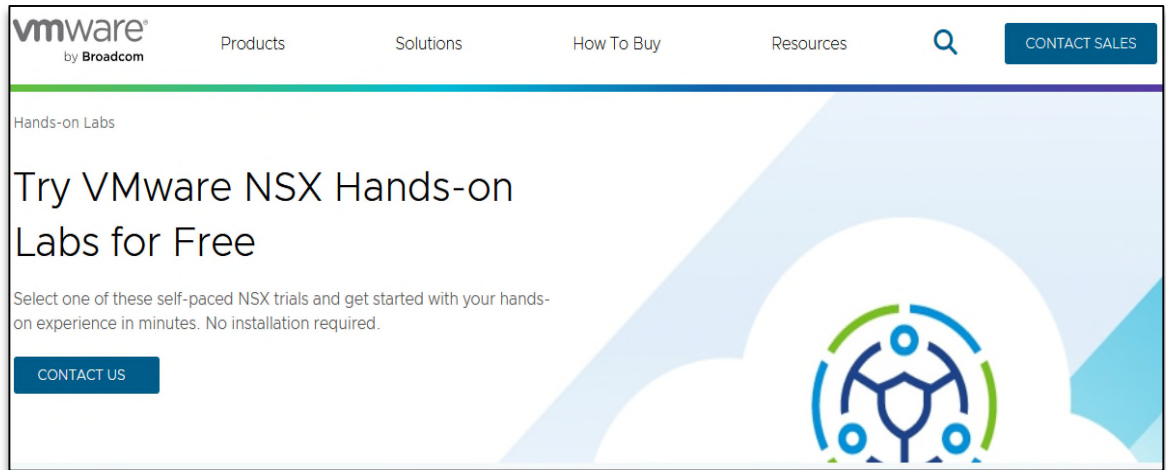


Figure 23. Screenshot from VMware NSX Hands-on Lab page offering customers the chance to experience NSX in minutes.

120. On Broadcom’s official VMware YouTube page, Broadcom and VMware explain that VMware Hands-On Labs “delivers a real virtualized infrastructure in the cloud powered by VMware” to let customers “try out products from the convenience of [their] browser.”<sup>77</sup> Broadcom and VMware further explain that “each self-paced lab is guided with a manual and built in modules so you can take all or just part of a lab and come and go from labs as often as you like.”<sup>78</sup>



Figure 24. Screenshot from VMware YouTube video titled “What are VMware Hands-on Labs?,” showing VMware Hands-on Lab Environment highlighted with in-lab manual highlighted in red.

<sup>77</sup> “What are VMware Hands-on Labs?,” VMware YouTube Channel, YouTube.com (June 25, 2014), [https://www.youtube.com/watch?v=XggYeVsK\\_R0](https://www.youtube.com/watch?v=XggYeVsK_R0), 0:25-32.

<sup>78</sup> *Id.*, 0:34-42.

121. Broadcom and VMware offer VMware Hands-on Labs directly related to use of NSX functionality that infringes the '102 Patent. For example, Broadcom offers a VMware Hands-on Lab on "VMware NSX – Advanced Networking (HOL-2540-02-VCF-L)," which is described as covering "advanced configurations for experienced users, including dynamic routing, multicast, VRF, Active/Active Gateways, Multi-Tenancy, VPCs, VPNs, and NSX federation capabilities for network and security self-service." This exemplary lab has a specific module on "Multi-Tenancy with NSX Projects and Virtual Private Clouds (VPC)."

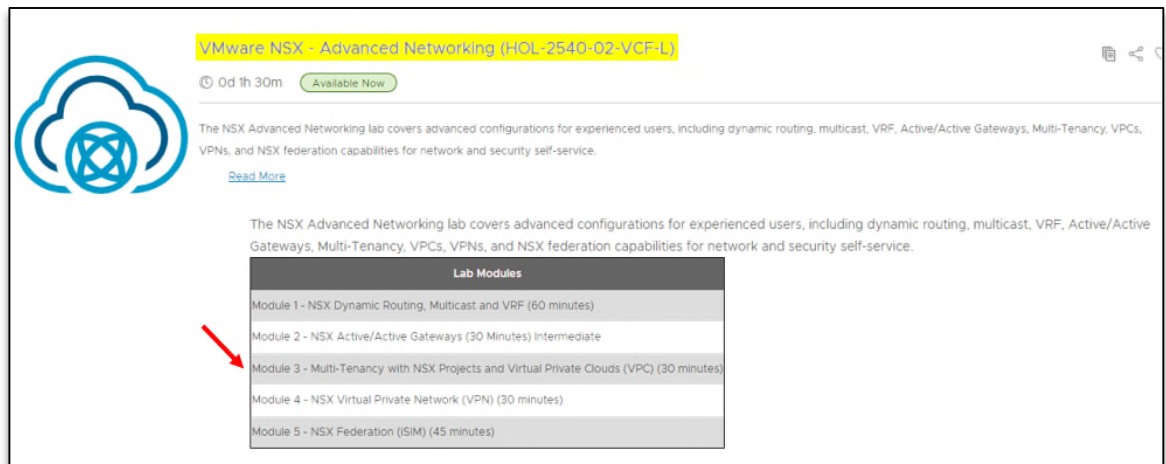


Figure 25. Screenshot from VMware Hands-on Lab Catalog for "VMware NSX – Advanced Networking (HOL-2540-02-VCF-L)" with the title highlighted in yellow and a red arrow highlighting a specific module.

122. Broadcom and VMware thus encourage their customers to infringe the '102 Patent at least by instructing customers on how to infringe by providing "manuals and built in modules" in proximity to "actual VMware products" for customers to practice infringing conduct through their VMware Hands-on Labs.

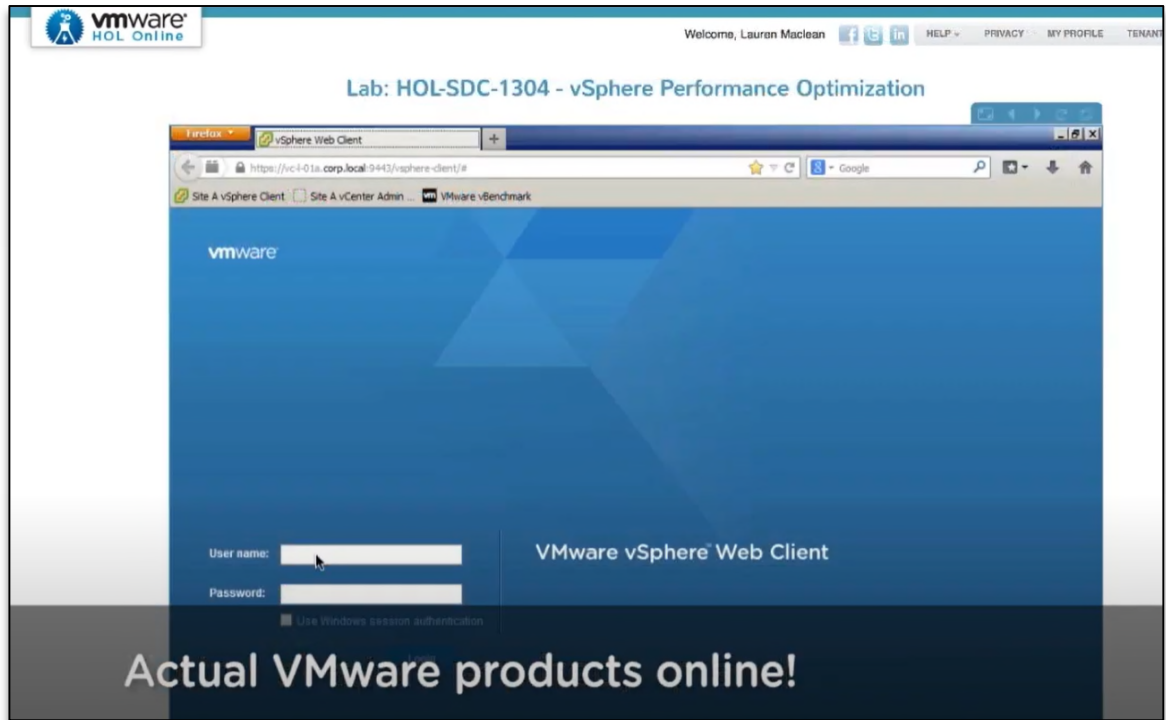


Figure 26. Screenshot from VMware YouTube video titled “What are VMware Hands-on Labs?”

123. Besides the VMware Hand-on Labs discussed above, Broadcom and VMware publicly share numerous instructions, troubleshooting manuals, and product documentations through Broadcom’s support portal (<https://support.broadcom.com/>) and at <https://docs.vmware.com/en/VMware-NSX/index.html>.

124. Like the Hands-on Labs discussed above, these support documents also provide step-by-step instructions explaining how to use the ’102 Accused Products in an infringing manner to provision subnets in NSX.

125. Thus, Broadcom and VMware have induced their customers to infringe the ’102 Patent. Broadcom and VMware’s knowing inducement of their customers to infringe has caused and continues to cause damage to Netflix, and Netflix is entitled to recover damages sustained as a result of Broadcom and VMware’s wrongful acts in an amount subject to proof at trial.

#### **INDIRECT INFRINGEMENT: CONTRIBUTORY INFRINGEMENT**

126. Broadcom and VMware have actively contributed to infringement of at least Claim 1 of the ’102 Patent in violation of at least 35 U.S.C. § 271(c). Broadcom and VMware sell the

1 '102 Accused Products which are software specially made or especially adapted to practice the  
2 method claimed in at least Claim 1 of the '102 Patent.

3 127. The '102 Accused Products have no substantial function or use other than to practice  
4 the invention claimed in at least Claim 1 of the '102 Patent at least because infringement of the  
5 claimed method is performed automatically when customers install the '102 Accused Products on  
6 a computer system and provision a subnet.

7 128. The '102 Accused Products are material components of the claimed method recited  
8 in at least Claim 1 of the '102 Patent and are not a staple article or commodity of commerce,  
9 including because they are specifically configured to infringe according to at least Claim 1 of the  
10 '102 Patent (*see* ¶¶ 95-112).

11 129. Broadcom and VMware's contributory infringements include, without limitation,  
12 making, offering to sell, and/or selling within the United States, and/or importing into the United  
13 States, the '102 Accused Products, which each include one or more components for use in  
14 practicing at least Claim 1 of the '102 Patent, knowing the component to be especially made or  
15 especially adapted for use in an infringement of at least Claim 1 of the '102 Patent (*see* ¶¶ 95-127),  
16 and not a staple article or commodity of commerce suitable for substantial non-infringing use.

### 17 WILLFUL INFRINGEMENT

18 130. As detailed above, Broadcom and VMware had knowledge of the '102 Patent and  
19 had knowledge, or were willfully blind, as to Broadcom's and VMware's infringement of the '102  
20 Patent.

21 131. Broadcom and VMware's infringement of the '102 Patent has been willful and  
22 deliberate.

23 132. As discussed above, Broadcom and VMware have had knowledge of the '102 Patent  
24 since at least December 23, 2024, when Netflix sent a notice letter to Broadcom's and VMware's  
25 Legal Departments by email and/or December 27, 2024 when they were served the same letter in  
26 hard-copy.

27 133. As discussed above, Broadcom and VMware knew or should have known that their  
28 actions constitute infringement or recklessly disregarded those facts.

134. The willfulness facts for the '472 Asserted Patent, ¶¶ 86-94, *supra*, are incorporated by reference herein.

135. Broadcom and VMware have willfully infringed the '102 Patent. Broadcom and VMware's knowing and willful infringement has caused and continues to cause damage to Netflix, and Netflix is entitled to recover damages sustained as a result of Broadcom and VMware's wrongful acts in an amount subject to proof at trial.

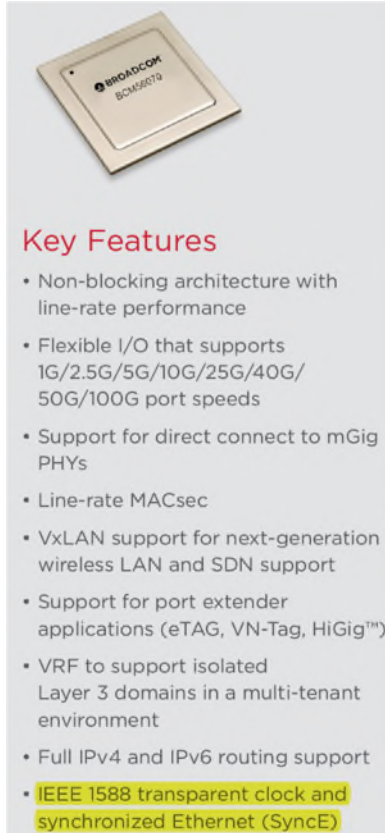
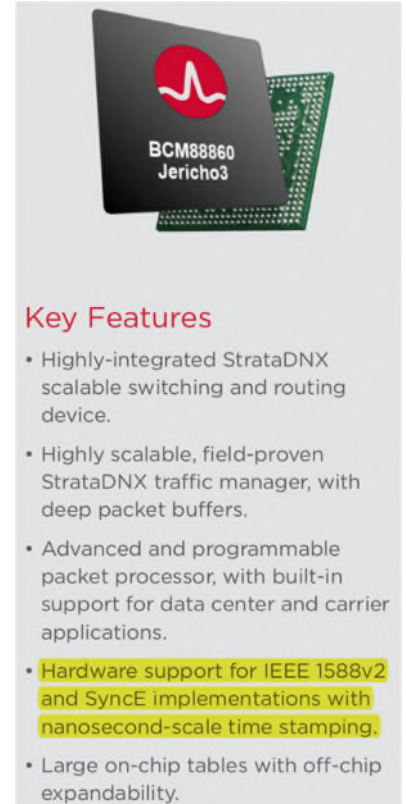
### **THIRD CLAIM FOR RELIEF**

#### **Infringement of U.S. Patent No. 7,649,912 (the "912 Patent")**

136. Netflix incorporates by reference all preceding paragraphs, *supra*.

137. Broadcom has infringed and continues to infringe, at least Claim 1 of the '912 Patent, either literally or under the doctrine of equivalents, by making, using, selling, and/or offering for sale within the United States and/or importing into the United States products that are covered by at least Claim 1 of the '912 Patent. These products include but are not limited to, the BCM56070; BCM88690; BCM88860; StrataDNX devices including, but not limited to, StrataDNX 28.8 T/s StrataDNX Ethernet Switch Router Series, StrataDNX 10 Tb/s Scalable Switching Device and 440 Gb/s TSN Ethernet Switch; BroadPTP 1588 Software Suite; BroadSync firmware for enabling synchronization between BroadSync slave devices (switch chips) and BroadSync Master devices; Optical PHYs; Industrial Broad-R Reach; mGig PHYs; Gigabit PHYs; Roboswitch; StrataXGSs; 10GBASE-T PHYs; Automotive Switches, as well as any other Ethernet-based products implementing and supporting the PTPv2 specification (collectively, "Broadcom Switching Accused Products").



**Broadcom's BCM56070****Broadcom's BCM88690****Broadcom's BCM88860**

*Figure 27. Exemplary Broadcom products that practice the claims of the '912 Patent.<sup>79</sup>*

138. Claim 1 the '912 Patent recites:

A method of synchronizing node clocks within a plurality of nodes on a network including a time master node having a master clock and including at least one time slave node, the method comprising:

connecting the plurality of nodes through a full duplex Ethernet network with a daisy-chain connection of the nodes to each other;

transmitting a time synchronization message frame from one of the plurality of nodes to a second one of said plurality of nodes, the

<sup>79</sup> BCM56070, 440 Gb/s TSN Multilayer Switch Product Brief, Broadcom.com (copyright 2020), <https://docs.broadcom.com/docs/56070-PB>; BCM88690 StrataDNX™ 10 Tb/s Scalable Switching Device Product Brief, Broadcom.com (copyright 2018), <https://docs.broadcom.com/doc/88690-PB100>; BCM88860 StrataDNX™ 28.8 Tb/s StrataDNX™ Ethernet Switch Router Series Product Brief, Broadcom.com (copyright 2023), <https://docs.broadcom.com/doc/88860-PB>.



1 time synchronization message frame having a timestamp field  
2 according to IEEE 1588 standard and a checksum field and a cyclic  
3 redundancy checking code;

4 at a given one of the plurality of nodes between the first and  
5 second nodes:

6 (i) receiving the time synchronization message frame;

7 (ii) reading a timestamp value of a timestamp field of the time  
8 synchronization message frame;

9 (iii) near a time of retransmission of the time synchronization  
10 message frame from the given node, adjusting the read timestamp  
11 value in the timestamp field by an amount of delay between time of  
12 reception and a time of the retransmission to produce a corrected  
13 timestamp value;

14 (iv) writing the corrected timestamp value over the timestamp  
15 value of the timestamp field of the time synchronization message  
16 frame;

17 (v) adjusting a checksum value in the checksum field and  
18 adjusting the cyclic redundancy checking code of the time  
19 synchronization message frame to account for adjusting the  
20 timestamp value; and

21 (vi) transmitting the time synchronization message frame  
22 from the given node; and

23 providing a highest priority to process and forward time  
24 synchronization message frames and lower priorities to process and  
25 forward other types of message frames.

26 139. The Broadcom Switching Accused Products implement a “method of synchronizing  
27 node clocks within a plurality of nodes on a network including a time master node having a master  
28 clock and including at least one time slave node.”

140. The Broadcom Switching Accused Products implement a precision clock synchronization protocol for networked measurement and control systems.<sup>80</sup> Specifically, the Broadcom Switching Accused Products include a Boundary clock, that is a “system with multiple connections – one source port and one or more sink ports.”<sup>81</sup> The Boundary clock system configuration is exemplified in the below figure from Broadcom’s User Guide:

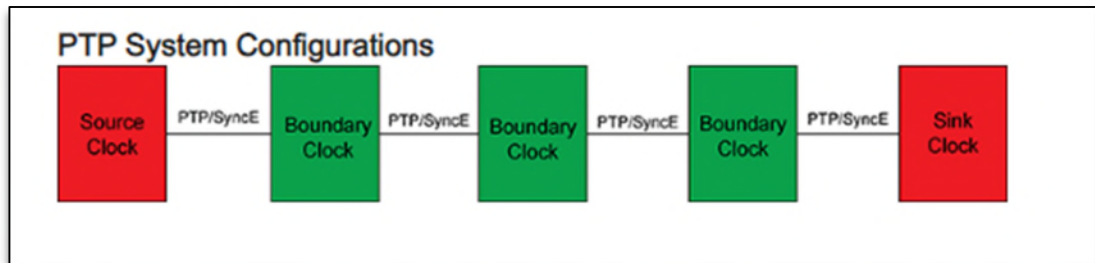


Figure 28. Graphic explaining PTP system configuration from the product user guide.

141. The Broadcom Switching Accused Products perform the step of “connecting the plurality of nodes through a full duplex Ethernet network with a daisy-chain connection of the nodes to each other.”

142. The Broadcom Switching Accused Products utilize a “clock synchronization protocol. This protocol is applicable to distributed systems consisting of one or more nodes, communicating over a network. . . . The protocol provides a mechanism for synchronizing the clocks of participating nodes to a high degree of accuracy and precision.”<sup>82</sup> “Clocks communicate with each other over a network. . . . PTP works on any packet-based system. PTP is designed to work in a multicast environment, although it is possible to design unicast PTP components and systems. Ethernet is an ideal network for implementing PTP.”<sup>83</sup> The PTP provides synchronization of one or more nodes communicating over a distributed network system (such as Ethernet network) and may be implemented within distributed topologies, such as a daisy-chain topology.<sup>84</sup>

<sup>80</sup> “Broadcom Ethernet Network Adapter User Guide,” PTP Specification, Broadcom.com (last updated October 21, 2024), <https://techdocs.broadcom.com/us/en/storage-and-ethernet-connectivity/ethernet-nic-controllers/bcm957xxx/adapters/Configuration-adapter/precision-time-protocol/ptp-specification.html>.

<sup>81</sup> *Id.*

<sup>82</sup> IEEE Std 1588™-2008 at 16.

<sup>83</sup> *Id.* at 208.

<sup>84</sup> *See, e.g.,* Get In Sync! IEEE1588v2 Transparent Clock Benefits for Industrial Control Distributed Networks, Microchip.com (March 22, 2012),

143. The Broadcom Switching Accused Products also perform the step of “transmitting a time synchronization message frame from one of the plurality of nodes to a second one of said plurality of nodes, the time synchronization message frame having a timestamp field according to IEEE 1588 standard and a checksum field and a cyclic redundancy checking code.”

144. The Broadcom Switching Accused Products transmit messages “between the source clock and the sink clocks on the network.”<sup>85</sup> These messages include Sync messages sent by the source clock to the sink clocks, containing “the current time as measured by the source clock” along “with an accurate timestamp that is generated at both the transmit time and receive time.”<sup>86</sup>

145. In the IEEE 1588-2008 PTP standard, a “Sync message is transmitted by a master to its slaves.”<sup>87</sup> The sync message “either contains the time of its transmission or is followed by a Follow\_Up message containing this time.”<sup>88</sup> “The message exchange pattern is as follows: a) The master sends a Sync message to the slave and notes the time  $t_1$  at which it was sent” and “b) The slave receives the Sync message and notes the time of reception  $t_2$ .”<sup>89</sup>

146. Once the Sync message is sent, the “<residenceTime>” is “added to the correctionField of the Sync event message by the egress port of the clock” which makes “any needed corrections to checksums or other content dependent fields of the message.”<sup>90</sup> The Broadcom Switching Accused Products include one-step clock features including “On-the-fly egress packet modification including UDP checksum updates and CRC updates.”<sup>91</sup> In this way, the Sync message essentially includes a timestamp field, a checksum field, and the other content

<https://ww1.microchip.com/downloads/aemDocuments/documents/OTH/ApplicationNotes/ApplicationNotes/GetinSync-WP.pdf>.

<sup>85</sup> “Broadcom Ethernet Network Adapter User Guide,” PTP Specification, Broadcom.com (last updated October 21, 2024), <https://techdocs.broadcom.com/us/en/storage-and-ethernet-connectivity/ethernet-nic-controllers/bcm957xxx/adapters/Configuration-adapter/precision-time-protocol/ptp-specification.html>.

<sup>86</sup> *Id.*

<sup>87</sup> IEEE Std 1588<sup>TM</sup>-2008 at 42.

<sup>88</sup> *Id.*

<sup>89</sup> IEEE Std 1588<sup>TM</sup>-2008 at 34.

<sup>90</sup> IEEE Std 1588<sup>TM</sup>-2008 at 117.

<sup>91</sup> Broadcom BCM56072/BCM56071N Low-Power 440G Switch Data Sheet, Broadcom.com (September 28, 2020), <https://docs.broadcom.com/doc/56072-56071N-DS1-PUB>.

1 dependent fields according to the IEEE 1588 standard.

2 147. As part of this method, the Broadcom Switching Accused Products perform steps “at  
3 a given one of the plurality of nodes between the first and second nodes” including “(i) receiving  
4 the time synchronization message frame and (ii) reading a timestamp field of the time  
5 synchronization message frame.”

6 148. In the precision time protocol utilized by the Broadcom Switching Accused Products,  
7 a sink clock “determines the time by receiving time synchronization messages from the source  
8 clock.”<sup>92</sup>

9 149. The Broadcom Switching Accused Products use a Sync message that is transmitted  
10 by a master to its slaves. The Sync message “may be used by a receiving node to measure the packet  
11 transmission delay from the master to the slave.”<sup>93</sup> A transparent clock then generates an “ingress  
12 timestamp for all version 2 event messages [] indicating the time of receipt of the event message  
13 on the ingress port.”<sup>94</sup> In this way, a receiving node receives the Sync message with the  
14 correctionField, and the correctionField indicates a time value in nanoseconds.

15 150. The Broadcom Switching Accused Products further perform the step of “(iii) near a  
16 time of retransmission of the time synchronization message frame from the given node, adjusting  
17 the read timestamp value in the timestamp field by an amount of delay between time of reception  
18 and a time of the retransmission to produce a corrected timestamp value” and the step of “iv)  
19 writing the corrected timestamp value over the timestamp value of timestamp field of the time  
20 synchronization message frame.”

21 151. The Broadcom Switching Accused Products also feature a Transparent clock capable  
22 of “correct[ing] network delays to improve the accuracy of the time distribution.”<sup>95</sup> In the  
23 Transparent clock’s peer-to-peer mode, as the source sends its timestamped Sync message to the  
24

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25 <sup>92</sup> *Id.*

26 <sup>93</sup> IEEE Std 1588<sup>TM</sup>-2008 at 42.

27 <sup>94</sup> *Id.* at 117.

28 <sup>95</sup> “Broadcom Ethernet Network Adapter User Guide,” PTP Specification, Broadcom.com (last  
updated October 21, 2024), <https://techdocs.broadcom.com/us/en/storage-and-ethernet-connectivity/ethernet-nic-controllers/bcm957xxx/adapters/Configuration-adapter/precision-time-protocol/ptp-specification.html>.

1 sinks, each network element along the way receives and adds the measured time delay correction  
2 to the Sync message.<sup>96</sup>

3 152. The precision time protocol utilized by the Broadcom Switching Accused Products  
4 discloses that before transmitting the Sync message, the egress port computes a residence time and  
5 adds it to the timestamp value in the correctionField of the Sync message to generate a corrected  
6 timestamp value. This correction is based on the difference in the timestamp generated when the  
7 Sync message enters and leaves the transparent clock. Specifically, the Broadcom Switching  
8 Accused Products utilize a method of residence time computation, in which the “residence time for  
9 each such event message shall be computed for each egress port” and the residence time is  
10 calculated by subtracting the ingress timestamp from the egress timestamp.<sup>97</sup> The Broadcom  
11 Switching Accused Products then utilize a residence time correction for Sync messages wherein  
12 the residence time is “added to the correctionField of the Sync event message by the egress port of  
13 the clock as the Sync event message is being transmitted.”<sup>98</sup>

14 153. The Broadcom Switching Accused Products perform the step of “(v) adjusting a  
15 checksum value in the checksum field and adjusting the cyclic redundancy checking code of the  
16 time synchronization message frame to account for adjusting the timestamp value” and the step of  
17 “(vi) transmitting the time synchronization message frame from the given node.”

18 154. In the Broadcom Switching Accused Products, corrections are made to checksum  
19 and other content dependent fields based on the corrected timestamp value. The PTP message frame  
20 modification includes UDP checksum updates and CRC updates. Specifically, in the Broadcom  
21 Switching Accused Products, the residence time is “added to the correctionField of the Sync event  
22 message by the egress port of the clock as the Sync event message is being transmitted.”<sup>99</sup> “The  
23 egress port shall make any needed corrections to checksums or other content dependent fields of  
24 the message.”<sup>100</sup> Further, the one-stop clock within the Broadcom Switching Accused Product

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25 <sup>96</sup> *Id.*

26 <sup>97</sup> IEEE Std 1588<sup>TM</sup>-2008 at 117.

27 <sup>98</sup> *Id.*

28 <sup>99</sup> *Id.* at 117.

<sup>100</sup> *Id.* at 117.

features “[o]n-the-fly egress packet modification including UDP checksum updates and CRC updates.”<sup>101</sup> “All modifications to Correction Field are handled in hardware with a very short residence time.”<sup>102</sup>

155. Finally, the Broadcom Switching Accused Products also perform the step of “providing a highest priority to process and forward time synchronization message frames and lower priorities to process and forward other types of message frames.”

156. The precision time protocol utilized by the Broadcom Switching Accused Products recommends “that PTP event messages be sent in high priority compared with other data.”<sup>103</sup> Implementations of the Broadcom Switching Accused Products’ precision time protocol “must ensure that adequate computing and memory resources are available to meet these requirements. Implementations must also ensure that the resources needed by the PTP implementation have adequate priority over other applications sharing these resources to meet the PTP and servomechanism timing requirements. PTP tasks should be assigned the highest priority in an implementation, similar to priorities assigned to the protocol stack and other operating system resources.”<sup>104</sup>

157. Accordingly, the Broadcom Switching Accused Products perform all steps of Claim 1 of the ’912 Patent.

### DIRECT INFRINGEMENT

158. Broadcom directly infringes the ’912 Patent in multiple ways.

159. Broadcom directly infringes the ’912 Patent at least when the Broadcom Switching Accused Products, automatically and by design, perform the steps of Claim 1 of the ’912 Patent, in violation of at least 35 U.S.C. § 271(a).

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<sup>101</sup> Broadcom BCM56072/BCM56071N Low-Power 440G Switch Data Sheet, Broadcom.com (September 28, 2020), <https://docs.broadcom.com/doc/56072-56071N-DS1-PUB>.

<sup>102</sup> *Id.*

<sup>103</sup> IEEE Std 1588™-2008 at 17.

<sup>104</sup> *Id.* at 190.



Figure 29. Broadcom's 440 Gb/s TSN Ethernet Switch with MACsec Encryption (BCM56070 series).<sup>105</sup>

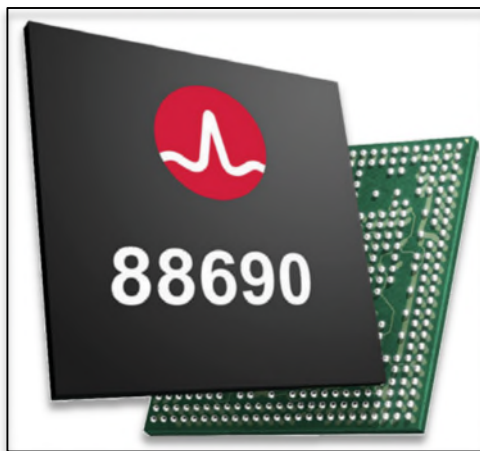


Figure 30. Broadcom's StrataDNX™ 10 Tb/s Scalable Switching Device (BCM88690).<sup>106</sup>

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<sup>105</sup> BCM56070, 440 Gb/s TSN Multilayer Switch Product Brief, Broadcom.com (copyright 2020), <https://docs.broadcom.com/docs/56070-PB>.

<sup>106</sup> BCM88690 StrataDNX™ 10 Tb/s Scalable Switching Device Product Brief, Broadcom.com (copyright 2018), <https://docs.broadcom.com/doc/88690-PB100>.



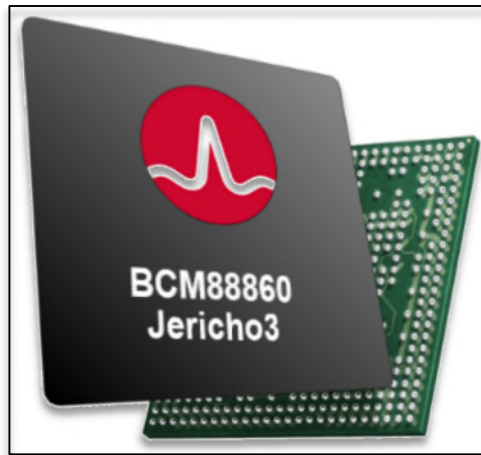


Figure 31. Broadcom's StrataDNX™ 28.8 Tb/s StrataDNX™ Ethernet Switch Router Series (BCM88860).<sup>107</sup>

160. Broadcom offers to sell and sells the Broadcom Switching Accused Products on its website via a button to contact Broadcom's Sales Americas.



Figure 32. Broadcom offers the Broadcom Switching Accused Products for sale.<sup>108</sup>

<sup>107</sup> BCM88860 StrataDNX™ 28.8 Tb/s StrataDNX™ Ethernet Switch Router Series Product Brief, Broadcom.com (copyright 2023), <https://docs.broadcom.com/doc/88860-PB>.

<sup>108</sup> BCM56070, 440 Gb/s TSN Multilayer Switch Product Brief, Broadcom.com (copyright 2020), <https://docs.broadcom.com/docs/56070-PB>; BCM88690 StrataDNX™ 10 Tb/s Scalable Switching Device Product Brief, Broadcom.com (copyright 2018), <https://docs.broadcom.com/doc/88690->

161. Broadcom also directly infringes by using the claimed method to demonstrate, test, install, and configure the Broadcom Switching Accused Products for its customers.<sup>109</sup>

162. Accordingly, Broadcom directly infringes the '912 Patent by selling the Broadcom Switching Accused Products and by using the Broadcom Switching Accused Products for testing and demonstrating performance of the Broadcom Switching Accused Products.

### INDIRECT INFRINGEMENT: INDUCEMENT

163. Broadcom has had actual knowledge of the '912 Patent and its infringement by the Broadcom Switching Accused Products since at least December 23, 2024, when Netflix sent a notice letter to Broadcom's and VMware's Legal Departments. *See* Exhibit D. That letter identified the '912 Patent, the infringing products, and a brief explanation tying an example claim to the infringing activities. *See id.* Broadcom and VMware did not respond to that letter or otherwise alter its infringing conduct.

164. Broadcom and VMware are sophisticated entities who have engaged in extensive patent litigation across the country. For example, Broadcom has been involved in no less than 45 patent cases since 2002.<sup>110</sup> As another example, Broadcom has at least 83 IP professionals in its legal department.<sup>111</sup> Broadcom and VMware had ample time to review Netflix's notice of its infringing activities and deliberately chose to not respond or alter their infringing behavior.

165. Broadcom has actively induced and continues to actively induce infringement of at least Claim 1 of the '912 Patent in violation of at least 35 U.S.C. § 271(b).

166. Broadcom's customers directly infringe at least Claim 1 of the '912 Patent when they use the Broadcom Switching Accused Products in the ordinary, customary, and intended way.

167. Broadcom has actively induced infringement of at least Claim 1 of the '912 Patent

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PB100; BCM88860 StrataDNX™ 28.8 Tb/s StrataDNX™ Ethernet Switch Router Series Product Brief, Broadcom.com (copyright 2023), <https://docs.broadcom.com/doc/88860-PB>.

<sup>109</sup> *See, e.g.*, "10G/25G/50G/100G IEEE 1588 Optical PHY," Broadcom Inc. YouTube Channel, YouTube.com (June 2, 2021), <https://www.youtube.com/watch?v=tq5cLOJ3DZY>.

<sup>110</sup> This information was collected from the Docket Navigator research tool by searching for the party "Broadcom Inc." Notably, this estimate does not include other Broadcom entities or subsidiaries.

<sup>111</sup> This information was collected by searching Broadcom's LinkedIn "People" tab, using the search "intellectual property OR patent OR trademark OR copyright," and limiting to individuals listed under "Legal."

1 in violation of at least 35 U.S.C. § 271(b). Users of the Broadcom Switching Accused Products  
2 directly infringe at least Claim 1 of the '912 Patent when they use the Broadcom Switching  
3 Accused Products in the ordinary, customary, and intended way. Broadcom's inducement includes,  
4 without limitation and with specific intent to encourage the infringement, knowingly inducing  
5 consumers to use the Broadcom Switching Accused Products within the United States in the  
6 ordinary, customary, and intended way by, directly or through intermediaries, supplying the  
7 Broadcom Switching Accused Products to consumers within the United States and instructing and  
8 encouraging such customers to use the Broadcom Switching Accused Products in the ordinary,  
9 customary, and intended way, which Broadcom knows or should know infringes at least Claim 1  
10 of the '912 Patent.

11 168. For example, Broadcom sells the Broadcom Switching Accused Products to its  
12 customers. When Broadcom's customers install the Broadcom Switching Accused Products and  
13 enable them for use, at least Claim 1 of the '912 Patent is performed. In at least this way, the  
14 customers of Broadcom directly infringe the '912 Patent while Broadcom knows of the '912 Patent,  
15 knows or should know that these activities infringe the '912 Patent, and specifically intends for its  
16 customers to perform these activities.

17 169. Broadcom instructs its customers, at least through marketing, promotional, and  
18 instructional materials, to use the infringing Accused Products, as described in detail above.  
19 Broadcom creates and distributes promotional and product literature for the Accused Products that  
20 is designed to instruct, encourage, enable, and facilitate the user of the Accused Products to use the  
21 Accused Products in a manner that directly infringes the Patent. And Broadcom provides  
22 instructions, support, and technical assistance to its customers in support of committing the  
23 infringement.

24 170. One non-limiting example of Broadcom's inducement includes Broadcom's  
25 BroadPTP 1588 Software Suite.<sup>112</sup> Broadcom's engineers provide specific instructions that  
26 Broadcom's BroadPTP solution can be used to implement at least Claim 1 of the '912 Patent in a  
27

28 <sup>112</sup> BroadPTP™ 1588 Software Suite, Broadcom.com  
<https://www.broadcom.com/products/ethernet-connectivity/software/broadptp>.

1 variety of different use cases.<sup>113</sup> “BroadSync is a Broadcom software-firmware that runs on a  
 2 StrataDNX/XGS internal ARM processor and it synchronizes the time-based events between a  
 3 BroadSync-Master (source) and BroadSync-Slaves (sinks). . . . BroadPTP software combines a  
 4 feature rich PTP stack with a highly flexible servo to provide an integrated and scalable PTP/IEEE  
 5 1588 solution.”<sup>114</sup>

6 171. Broadcom encourages its customers to infringe the ’912 Patent at least by instructing  
 7 customers on how to infringe by providing software and “manuals and built in modules” in  
 8 proximity to Broadcom products for customers to practice infringing conduct through the use of  
 9 the BroadPTP and BroadSync software packages for use with Broadcom switch products.

10 172. Thus, Broadcom has induced its customers to infringe the ’912 Patent. Broadcom’s  
 11 knowing inducement of its customers to infringe has caused and continues to cause damage to  
 12 Netflix, and Netflix is entitled to recover damages sustained as a result of Broadcom’s wrongful  
 13 acts in an amount subject to proof at trial.

#### 14 **INDIRECT INFRINGEMENT: CONTRIBUTORY INFRINGEMENT**

15 173. Broadcom has actively contributed to infringement of at least Claim 1 of the  
 16 ’912 Patent in violation of at least 35 U.S.C. § 271(c). Broadcom sells the Broadcom Switching  
 17 Accused Products, which are especially adapted to practice the method claimed in at least Claim 1  
 18 of the ’912 Patent.

19 174. The Broadcom Switching Accused Products have no substantial function or use other  
 20 than to practice the invention claimed in at least Claim 1 of the ’912 Patent at least because  
 21 infringement of the claimed method is performed automatically when customers install and enable  
 22 the Broadcom Switching Accused Products.

23 175. The Broadcom Switching Accused Products are material components of the claimed  
 24 method recited in at least Claim 1 of the ’912 Patent and are not a staple article or commodity of  
 25 commerce, including because they are specifically configured to infringe according to at least

26 <sup>113</sup> See, e.g., “High Port Density Timing Card for Next Gen Networks,” Open Compute Project  
 27 YouTube Channel, YouTube.com [https://www.youtube.com/watch?v=lavW\\_621DMk&t=503s](https://www.youtube.com/watch?v=lavW_621DMk&t=503s).

28 <sup>114</sup> “BroadSync™: Using your own PTP stack with Broadcom chips,” ipInfusion.com (June 21,  
 2020), <https://www.ipinfusion.com/resources/broadsync-using-your-own-ptp-stack-with-broadcom-chips/>.

1 Claim 1 of the '912 Patent (*see* ¶¶ 136-162).

2 176. Broadcom's contributory infringements include, without limitation, making, offering  
3 to sell, and/or selling within the United States, and/or importing into the United States, the  
4 Broadcom Switching Accused Products, which each include one or more components for use in  
5 practicing at least Claim 1 of the '912 Patent, knowing the component to be especially made or  
6 especially adapted for use in an infringement of at least Claim 1 of the '912 Patent (*see* ¶¶ 136-  
7 174), and not a staple article or commodity of commerce suitable for substantial non-infringing  
8 use.

### 9 **WILLFUL INFRINGEMENT**

10 177. As detailed above, Broadcom and VMware had knowledge of the '912 Patent and  
11 had knowledge, or were willfully blind, as to Broadcom's and VMware's infringement of the '912  
12 Patent.

13 178. Broadcom and VMware's infringement of the '912 Patent has been willful and  
14 deliberate.

15 179. As discussed above, Broadcom and VMware have had knowledge of the '912 Patent  
16 since at least December 23, 2024, when Netflix sent a notice letter to Broadcom's and VMware's  
17 Legal Departments by email and/or December 27, 2024 when they were served the same letter in  
18 hard-copy.

19 180. As discussed above, Broadcom and VMware knew or should have known that their  
20 actions constitute infringement or recklessly disregarded those facts.

21 181. The willfulness facts for the '472 Asserted Patent, ¶¶ 86-94, *supra*, are incorporated  
22 by reference herein.

23 182. Broadcom and VMware have willfully infringed the '912 Patent. Broadcom and  
24 VMware's knowing and willful infringement has caused and continues to cause damage to Netflix,  
25 and Netflix is entitled to recover damages sustained as a result of Broadcom and VMware's  
26 wrongful acts in an amount subject to proof at trial.

### 27 **PRAYER FOR RELIEF**

28 Netflix respectfully requests the following relief:





1 Dated: April 29, 2025

**BAKER BOTTS L.L.P.**

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